

AMERICAN AGRICULTURIST,

ADAPTED TO THE

Farm, Garden, and Household.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN—WASHINGTON

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EDITOR AND PROPRIETOR.

ESTABLISHED IN 1842.

{ \$1.00 PER ANNUM, IN ADVANCE.
SINGLE NUMBERS 10 CENTS.

VOL. XIX.—No. 2.

NEW-YORK, FEBRUARY, 1860.

[NEW SERIES—No. 157.]

Office at 139 Water-st., (Near Fulton-st.)
Contents, Terms, &c., on pages 60-64.

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American Agriculturist in German.

The AMERICAN AGRICULTURIST is published in both the English and German Languages. Both Editions are of Uniform size, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs.

February.

"Earth robed in white a peaceful Sabbath holds,
And keepeth silence at her Maker's feet,
She ceaseth from the harrowing of the plow,
And from the harvest-shocking; man should rest
Thus from his fevered passions, and exhale
The unbreathed carbon of his festering thought,
And drink in holy health. As the tossed bark
Doth seek the shelter of some quiet bay
To trim its shattered cordage, and restore
Its riven sails—so should the toil-worn mind
Reft for Time's rough voyage."

Mrs. SIGOURNEY.

It were a sad thing not to be in harbor at this inclement season, having all the ship gear snugly stowed, with rest and reflection marked out as the leading items of business. Every spar is sheathed with ice, the furled sails have every fold full of frozen sleet, and the deck is slippery as glass. Large icicles hang from the bowsprit, and a wreath of frost-work, beautiful as chased silver, girds the noble craft. There let her rest in winter quarters.

A winter morning like this, which almost curdles the ink in the pen as we write, were worth a long journey to see, and our summer friends from the tropics, and from the sunny south, who come to spend "dog-days" and to drink ice-water with us, should stay over one season, and see the ice at its fountain head, our ponds, lakes, and rivers bridged with crystal, our forests jeweled with diamonds, and all the green fields of summer robed in purest white. What scenes of tropical vegetation, of broad-leaved evergreens, or cypress woods festooned with funeral moss, grand as they are, can equal our pine and hemlock forests, our mountain sides and summits, clothed with fir, and spruce, when the frost-king robes them in their winter array, and the morning sunbeams bring out the full beauty and grandeur of the scene. Every object in Nature wears a new aspect in these winter days. The brooks that sparkled and danced in the summer, are now stiffened into carved crystal, and glitter with the beauty of still life. What artist could fix in stone,

forms so beautiful as fringe the winter stream, the ice-clad rock, the grotesque shapes that guard the water-fall, the beaded grass and bushes, reflecting all the hues of the rainbow! The sere brown fields of autumn are white as robes of vestal. The forests, bare of foliage, and deserted by the singing birds, awe the spirit by their silence, and invite to self communion and reflection.

Yet there are not a few upon the farm who think that the tiller of the soil has little occasion for reflection, or any other mental exercise. Others may drink at the fountain of knowledge, and hold communion with the living soul that animates all these material forms, and understand those lessons which God has impressed upon all the works of his hands. But these are not the things for the farmer to contemplate. They regard all the learning of the schools, beyond the simplest rudiments of education, as so much useless lumber in the farmer's mind. They have no objections to reading, writing, and ciphering, for these branches enable him to keep accounts, and to guard himself against the frauds of designing men. But anything more than this, the knowledge of the earth and its history, the grammatical structure of language, the studies which teach a man to think, and use his stores of knowledge already gained, they regard as a useless waste of time, and tending to unfit a man for the cultivation of the soil. They would claim that schools are among the active agencies that are now depopulating the farm, and drawing our sons and daughters into other pursuits, already overstocked. They believe that the cultivation of the soil is mainly a business of brute muscle, and that it matters very little whether more or less brains guide the hand of the laborer. The working of this leaven is seen in the facts imperfectly brought out in our census returns, showing in one State over ninety thousand white adults, who can neither read nor write; in four other States over seventy thousand each, and in three others over sixty thousand each, and in the whole country nearly a million of this uneducated class. By far the larger part of these are upon the farm, and have grown up with the idea ruling in the minds of the parents, that education is useless to men and women who are expecting to earn their bread with their hands.

Now it may be true that an unlettered laborer will lift as large a stone as he could do with a college education, that he can drive a horse or ox as well, and get as much labor out of brute muscles. But this does not prove that education will not help him in his business. A small part only of farm labor consists in dead lifts. The cultivator has many occasions every day in which skill will be worth more to him than strength, in the use of his own labor, as well as in directing the labor of others. It is undoubtedly true that education does beget a distaste for a certain kind of manual labor. The intelligent mind is not satisfied with this as an end. It craves the best results

possible for every blow struck upon the farm. An adventurous Yankee, in a back settlement, was put to chopping wood with an old-fashioned tool, looking more like a tomahawk than an ax. When he found that he could not do a half-day's work with it, he threw it aside in contempt, declaring that money could not hire him to chop wood with such an implement. His mental culture had unfitted him—not for manual labor—but for an unskillful and unprofitable use of his muscles. Every blow that he struck, reminded him painfully of the better tool to which he was accustomed, and with which he could do twice the amount of work. He wanted something more than wages for his toil. He wanted the work done in a manner profitable to his employer.

And here, we apprehend, is the spot where the shoe pinches with the multitudes of our young men educated in our free schools. They have much better advantages for education than their fathers had fifty years ago, and their reading in books and journals keeps them in sympathy with the improvements that are constantly going forward in husbandry. The fathers want to keep on in the old routine methods, using nothing new but what is forced upon them by necessity. The sons object to this continual waste of human muscles, so long as they know a more excellent way. They can not be content with scratching the earth with an old-style plow and wooden mold-board, four inches deep, when the same amount of human labor, with a deep tiller, would loosen the soil fourteen inches, and make a seed bed in which all crops would rejoice. It is a source of mental discomfort to use a hoe weighing five pounds, when with one pound of steel they can hoe more, and better. It goes against the grain to use the hand-hoe between the rows, where the horse-hoe will do the work of ten men equally well. They could endure the scythe and the cradle when there was nothing better with which to gather the summer harvest. But now that a span with a mower or reaper will do the work of a dozen hands, the old fashioned scythe is an instrument of torture, and the July sun scorches like the breath of a furnace. The fathers are content with forty bushels of corn, or a tun of hay, to the acre. The sons know that these crops can be doubled without any greater tax upon the muscles. Labor is economized in manifold ways, and the boys, who have learned to cipher, see at a glance the difference between the old and the new methods of husbandry—between a bare living and an early competence or substantial wealth upon the farm. If they can use their minds in the cultivation of the soil, and make their labor remunerative, they have no objection to abide upon the homestead. But if a dogged conservatism rules the paternal acres, and work, irrespective of its reward, is glorified, the lads pack their trunks and seek a new field of labor—who can blame them?

It is a slander to say that learning has spoiled

hem for manual labor. It has only created a disgust for unprofitable labor. Education increases many fold, the power of the human body over its outward circumstances. It substitutes steel and the muscles of brutes for the sinews of man, and makes him a workman that need not be ashamed in the subduing of the earth. Let the boys and girls, then, make the most of the winter schools. Let it be your settled policy to make farming attractive to your children. Encourage them to make experiments, and furnish them with every facility to make the most of their labor. Especially lay out your skill and theirs on the garden and orchard, and rear a new Eden around your home. So shall you dwell there in peace, and your children not be driven out, leaving bitter memories behind them.

Calendar of Operations for Feb. 1860.

[We note down sundry kinds of work to be done during the month, not so much to afford instruction to practical men, as to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45°; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the South, later for the North.]

This table will be much fuller, and more important during the planting season when there is a greater variety of work to be done.

EXPLANATIONS.—*f* indicates the first; *m* the middle; and *l* the last of the month.—Doubling the letters thus; *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signifies that the work may be done in either or in both periods indicated; thus, work marked *fm* indicates that it is to be attended to from the first to the middle of the month.]

Farm.

February, though the shortest month of the year is at the North counted the most tedious by many. The energetic farmer wearies of the comparative inactivity of the season, and is in haste to start the plow; the careless one finds his neglected stock rapidly losing in value, and is waiting anxiously for the first springing of the grass. The animals themselves grow restless under confinement. The main care required during this month will be additional attention to animals, to keep them "in good heart," that they may have no loss to recover when spring opens. Much preparatory work may also be done, plans of work completed, implements prepared, marketing finished, and every thing made ready for a prompt beginning with the opening season.

Buildings need frequent inspection to keep them from decay. Fasten all loose boards; properly secure windows and doors; batten cracks, knot-holes, and other leaks where cold enters and hay is wasted. Get out timber for new buildings if needed.

Cattle—Give frequent changes of food, allowing roots, bran mashes, a little grain, etc., with hay. Cut and cooked foods are most economical. Give plenty of litter. Keep cows about to calve, in separate stalls with ample room.

Cellars—Protect from frost but provide for ventilation, especially where there is dampness. Sort out decaying vegetables; allow no accumulation of refuse, but remove all to the compost heap.

Corn Stalks still standing on fields to be plowed next Spring, may be leveled during open freezing weather, as described in Dec. No. p. 358, last Vol. This will greatly facilitate the plowing.

Cotton—As soon as the season permits, prepare deep rich beds of fine tilth to bring forward the plants as early as may be.

Drains—Remove obstructions of ice, etc., both around the buildings and in the field.

Fencing—Materials may be got out, and prepared under cover. Build new and repair old, at the earliest available time.

Flax and Hemp—Finish dressing.

Fuel—Be sure to provide a year's supply, cut and stored before Spring.

Grain should all be threshed now—vermin are taking heavy toll; secure the bins from their entrance. Market whenever prices are remunerative.

Grain and Clover Fields—Allow no stock to feed or trample the young growth.

Help—Secure a full supply before choice hands are all engaged. Read "Talks by the Doctor" on page 54.

Horses and Mules—Look well to their feet; keep sharp-shod, and clean well after traveling. Give carrots and

cut feed. Keep them in comfortable stables; blanket when excessively cold, and allow plenty of bedding.

Hogs—Feed liberally, with warm, cooked food, with which mix charcoal and salt occasionally, especially for breeding sows. Keep pens well littered with leaves or short straw, to increase the stock of manure.

Ice Houses—Complete filling; examine drainage and ventilation to secure perfect preservation.

Manures—Depend on home manufacture, rather than the purchase of highly advertised compounds. Keep muck or plaster in all places where ammonia may be absorbed. Cart out in open weather. Read articles now in course of publication on subsequent pages.

Maple Sugar—Have all apparatus in readiness. Commence tapping as soon as sap will start. For large groves, an improved evaporator will pay.

Potatoes—Secure the best for seed; keep varieties separate. At the South plant early for northern market.

Poultry will repay proper care. Read article on page 41. Sheep—Give potatoes, turnips and other roots cut fine, with hay, and a little grain for breeding ewes. Allow them warm sheds separate from other stock. Salt regularly and give plenty of water.

Sweet Potatoes at the South may be bedded out for a supply of sets for transplanting.

Tools—Repair all needing it; replace those lent, and return borrowed; select new for coming season. Keep iron from rust with 3 parts lard and one of resin, melted together. Paint all wood-work needing it.

Orchard and Nursery.

Unless the season is early enough to admit of transplanting during the latter part of the month there will not be much work required here. Where trees are taken out early to be shipped South, great care is needed in packing, to guard against freezing. Those which are frozen, should be unpacked carefully and the roots buried in sand until thawed. Early planting in the nursery is desirable, and everything should be in readiness to commence work at the first favorable weather. Grafting is better done here in March; at the South February is favorable. See article on Grafting knives on page 51.

Cions—Cut any time this month. Label each sort distinctly, and preserve as directed last month.

Insects—Scale bug can now be readily destroyed by scraping the trunk and main limbs, and scrubbing with whale oil soap or lye. Examine the forks and ends of limbs for cocoons and eggs of worms.

Manure is needed to promote fruitfulness in the orchard. Apply a heavy coat around each tree, of good compost, or decomposed muck, spreading it well.

Pruning—We advise late Summer or early Autumn for this work, but now is a better time than after the buds have swollen and the sap started. All dead wood may be removed without injury.

Snow—Remove from the branches of low spreading trees, to prevent splitting of the limbs as it settles.

Stakes, labels, tallies, packing bags, mats, etc.—Have a good stock in readiness for Spring use during the busy season of nursery sales or planting.

Transplanting may commence as soon as the frost is out of the ground, and the soil in working order.

Kitchen and Fruit Garden.

Active operations commence in this department this month at the South, particularly where produce is raised for northern markets. The earlier vegetables can be brought forward, the more remunerative are the prices.

In this latitude, preparations can be made by planning the grounds, providing abundance of manure, putting implements in order, and in the latter part of the month making hot-beds.

Cold Frames—Air may be admitted during mild weather. If cold continues, do not remove the snow covering. During cold, open weather protect with mats or straw.

Cuttings of Currants, Gooseberries and other fruits may be taken when the wood is not frozen. Keep them buried in sand in the cellar or other secure place.

Fences—Keep in repair, and prepare materials for new where wanted.

Grape Vines may be pruned early this month.

Hot-Beds—Nothing is gained by making them too early; for family use, next month will be time enough. If the weather is sufficiently mild at the end of February, enough tomatoes, cabbage and lettuce, etc., may be sown for the earliest plantings of market gardeners.

Manures—Lose no opportunity of collecting an ample store. The quantity may be increased and the quality improved for many uses, by composting with muck, leaves saw-dust, etc.

Prune Currants and Gooseberries early if neglected until now.

Rhubarb—Roots planted in boxes and set in the green-house or other place suitably warmed will come forward early. It may be hastened by surrounding the crown with manure. Read article on page 50.

Seeds—Select new and improved kinds from catalogues. Try samples before purchasing largely. They are easily sprouted, if good, by laying them on cotton in a dish of water placed near the stove.

Tools—Have all in repair and procure new if needed.

Trees and Vines—Cleanse from moss, insects, rough scaly bark, etc.

Trellises and Arbors—Make necessary repairs, and erect new. Fruits and flowers are more attractive when trained on tasteful supports.

Flower Garden and Lawn.

Although there is not much save the evergreens, to attract admiration upon the lawn, and the flowers are still out of sight, neatness and tidiness should be preserved. Remove all dead branches and scattering twigs which have fallen upon the walks or plats. If trees or shrubs have been thrown out of place by wind, brace them up, and confine with straw ropes or matting and twine, until they can be permanently righted. Allow no animals to invade the enclosure to destroy the shrubbery. If the weather be sufficiently mild, new trees and shrubs may be planted. Further South, borders may be prepared and sown with annuals.

Evergreens—Remove snow that endangers the limbs.

Hot-Beds—Provide materials for, and make during the latter part of the month for early annuals, cuttings, etc.

Manures—Collect a good supply of muck and stable manure for Spring use. A good dressing will promote a vigorous growth and a free bloom.

Prune Altheas, Roses, Honeysuckles, etc., during the mild days of this month, unless they were attended to last Fall. Save the cuttings for propagating a new stock.

Transplanting—Hardy trees and shrubs may be set out during the latter part of the month if the frost will permit.

Green-Houses.

Care will be requisite not to overheat the houses by too much fire upon cold days; ventilation will also be required when the weather is mild, as the sun's rays have now considerable power. The plants should receive no chill by sudden changes. From 45° to 50° should be maintained, allowing the temperature to fall at night to about 40°.

Azaleas—Water more freely as they increase in growth.

Cape Bulbs in pots require plenty of light to ensure thrifty and hardy growth. Sow seed and make cuttings; give bottom heat to those thus starting.

Cuttings of Hydrangeas, Fuchsias, Myrtles, Pelargoniums, etc., may now be prepared to furnish supply for outdoor planting.

Decayed branches, leaves and all litter should be swept out often, refuse of every kind removed, and the air kept free from impurities; want of cleanliness detracts greatly from the appearance of the green-house.

Insects—Watch carefully against every species; keep them in check by syringing and fumigations. A cat should be allowed free access, as mice often prove troublesome.

Top dress unthrifty plants, and give a little manure water from time to time.

Water—Increase the amount as the plants push into growth, but avoid an excess. Keep the drainage good.

Hot-Houses and Conservatories.

Many of the directions of last month are still seasonable. The frequency of change in the weather makes great watchfulness necessary to regulate the fires. From 70° to 75° of heat should be maintained. If snow falls, the roof should be cleared to admit the light which the rapidly growing plants now require. If from want of proper ventilation the condensed moisture gathers and drops upon the plants below, tin conductors should be suspended to collect and carry it off.

Air—Admit cautiously by the top sashes, as often as the weather will allow; cold currents must be avoided, as a check now will retard the growth of many plants until late in the season.

Azaleas, now in bloom, should be syringed freely.

Bedding Plants—Insert cuttings and make layers for a good stock of Petunias, Pelargoniums, Verbenas, Dianthus, Candytuft, Pansies, Dicentras, Daisies, etc., for early planting in the open border.

Bulbs—Keep a succession of plants in bloom by bringing forward those kept in a cool room, or the Green-House. Change the water of those in glasses, about twice a week.

Camellias—Syringe once or twice a week, but keep the water from falling on the flowers as it hastens their decay. Examine the foliage for traces of the red spider which injures many collections. If plants are affected, wash each leaf with a sponge and soft water, and syringe three or four times a week.

Carnations—Increase stock by making layers and cuttings.

Cuttings may now be taken from many growing plants. Plunge them at once into prepared pots of soil and cover with glasses.

Grapes require much care in the early houses this month

Those beginning to color, or about ripening, need a comparatively dry and warm atmosphere. Later vines require thinning, while others have been so kept back as to have scarcely "burst" into growth. Use sulphur to counteract or destroy mildew.

Insects are now troublesome, unless they have been kept in check by following the directions already given. Fumigating with tobacco will be found effectual to destroy any which have established themselves.

Repotting—Many rapid growing plants will now require a shift to pots of a larger size. Keep potting soil at all times in readiness.

Seeds of many of the hardy annuals should be sown for an early blooming stock to be planted in the open grounds.

Soil in Pots—Stir often to prevent its crusting. Keep free from weeds.

Syringing often will maintain a humid atmosphere, which is requisite at this season. Dampening the walls and floors has a similar effect.

Water—Give judiciously according to the wants of growing plants. Excess is quite as injurious as too little. Twice a week will usually be sufficient. Evaporating pans filled with water, and placed in different parts of the houses or rooms will be beneficial.

Apiary in February.

BY M. QUINCY.

Care is still necessary to see that the air passages are not closed with dead bees or ice during severe weather. Moderate temperature for a day or two, will melt all the frost, when the hive should be raised and the bottom board swept off clean....Particles of comb scattered on the floor, indicate that mice have found their way inside; they should be at once excluded. Any stocks that are to have their stands changed before Summer, should now receive attention, whether the distance be rods or miles. The weather may be warm enough for them to fly before the month is out; it is much better to have them mark their permanent locality at first. If a new bee house is to be erected this Spring; choose some mild days in this month and have it ready, and the bees introduced before they leave their hives. If bees are to be purchased and brought home, they can be moved easily on snow. The heaviest hives are not often best; those weighing from thirty-five to forty pounds are preferable. See that there is a good cluster of bees among the combs. The size of the colony may be estimated by the quantity of chips on the floor board....The hive, whether carried on a spring wagon, or sleigh, should be inverted. The bees may be confined to the hive by covering it with thin muslin, fastened at the corners with tacks. In arranging the stands, give four feet between the hives, if possible to spare the room, six feet would be better; but in a bee-house, or other small place, stocks must sometimes be crowded.

Forward Spring Work Now.

"Take time by the forelock" is as good a maxim for farmers as for others. While there are some kinds of labor that can only be performed at particular seasons, there are others that can be done at any time, when the weather favors out door operations. The Spring, in all the northern part of our country is a very brief season, and upon the farm, it is usually over crowded with work. Slack farmers especially, leave every thing to this season. The manure is not carted until the ground is settled; the plowing is put off until May, and the planting until June; the potatoes and oats that flourish best in cool weather, are forced to mature in the heat of dogdays and rot, rust, and smut are often the result of the late sowing and planting.

Something can be done even at this season, to help on the Spring work. The wood house is, or ought to be already filled so that the ax will not need to be lifted to prepare fuel from March to December. A good part of the manure can be carted now, much better than in planting time. The ground is now frozen so that the cart path to the field to be plowed, is soon worn as smooth as a railroad. It will be a much less tax upon the strength of a team to draw a hundred loads of manure now, than to do it in April, when the team is pressed with plowing and other farm work. It is pretty well established now, that yard manure prepared in the usual way with muck and loam, does not lose much of its value,

when piled up in Winter in large heaps in the field where it is to be used. From our own experience we do not think green stable manure would be injured by the same treatment, if it were well mixed in the field with muck or peat. The piles should be made long, narrow, and high, say five or six feet so as to shed a part of the rain.

If any of the meadows are to be dressed with fine compost, there is no better time than the present to do it. The sward will not be cut up, and the warm Spring rains will carry down the fertilizing properties of the manure to the roots of plants. This must not be done however, on rolling land, or on steep hill sides where the rains would wash off part of the manure before the frost comes out of the ground.

A large portion of the Spring work can be anticipated before Winter breaks up, and then the farmer can seize upon the best time to plant and sow, and drive his work all through the season instead of being driven.

Protect the Tender Plants.

During this month and the next, all tender trees and shrubs will be liable to injury from frost. In the earlier months of the Winter, they were in so deep a slumber, that there was little danger of their being awakened by the brightest and warmest sunshine. But now, they have had a good nap, and are ready to be aroused; and the sun has risen higher in the heavens, and shines with greater power. For these reasons, tender vegetation is liable to injury.

Therefore, if any one has hitherto neglected to protect his tender trees, shrubs, and vines, let him now do so, without delay. In most cases a very light covering will answer, such as a few evergreen boughs, an old sack or mat, or a little straw—just enough to keep off the sun. A friend of ours gets a fine annual display of *Spiraea prunifolia*, by simply wrapping his wife's old apron around the top of his bush, while his neighbors, who take no such precautions, very often have none. The Swedish and American Junipers are hardy enough, but they often come out in the Spring in quite a rusty, purplish dress; and the American Yew looks quite shabby; but this rustiness might be easily prevented by some simple protection, as before noted. The trunks of pear-trees, cherry-trees, peach-trees, and some ornamental trees may profitably be sheathed in straw, or have a section of bark, or a simple board set up on the south and west sides.

Hastening Vegetation in Spring.

One mode is by sheltering plants from cold winds, and exposing them as much as possible to the rays of the sun. This can be effected by building walls or high, close fences on the stormy sides of gardens and orchards, also by surrounding them with hedges and belts of evergreen trees. In England, it has been found by an experiment of several years, that cherry-trees trained against a south wall, will ripen their fruit ten days or a fortnight earlier than in the open orchard. In cold, damp, and cloudy summers, the difference is less obvious, but even then, the flavor of the wall fruit is superior to the other.

Skillful gardeners sometimes gain an advantage of several days, by throwing up beds or banks with a slope to the south, of about 45°, and planting thereon their earliest crops of lettuce, radishes, peas etc.; the northern slopes being used for late crops.

Of the influence of manure in accelerating vegetation, we need hardly speak. Everybody

knows what tropical growth horse manure engenders in hot-beds and forcing houses, while yet the soil of the common earth around is cold and unproductive. Everybody knows what wonders guano, hen dung and other fertilizers perform every spring in garden and field. But aside from the action of real manure, there is a benefit to be derived from the use of other substances, such as sand and lime on clayey soils, of chip-dirt and leaf-mold, the tendency of which is to lighten up the ground and free it from surplus water. The use of leaf-mold, charcoal, chip-dirt, blacksmith cinders and whatever tends to make the soil dark-colored, contributes to the same result.

Here too, may be mentioned the powerful influence of under-draining, which rids the soil of standing water, and prepares it to absorb the earliest rays of the Spring sun. Ridging up the earth in winter, tends in the same direction, and for the same reason. Faithful attention to these two last processes often gives the gardener a gain of a week or fortnight in spring.

Here may be mentioned also, the importance of selecting proper seeds. The seeds of fruits or vegetables, which ripened earliest the preceding year, are likely to start earlier and to mature quicker than those which ripened late. Every gardener, therefore, should take great pains each year to save his seeds from the earliest matured products of his grounds.

Think Twice before You Move.

Multitudes are contemplating a move, *somewhere*, in the coming Spring, or as soon as they can sell out, reckless of the old maxim: "A rolling stone gathers no moss." They have just got their farms cleared up, and taken a few crops from the virgin soil, or they are situated upon the old homestead, with a hundred acres of poor, hard cropped land. They have good neighbors, good schools, and good markets; but they are not making money quite so fast as they wish to, and mean to try their fortunes in a new place.

Some, of course, in the older States, must move to make room for the increasing population, but, as a rule, they should be the young, who are not yet married, and have not the necessary capital to purchase a farm at the East. The probability is, that such will do better where land is cheaper, and labor commands a better price. But if a man is already settled, and has pleasant associations around him, the probability is, that he will lose money by moving. If there is nothing else wrong but the land, pluck and industry will bring that right. There may be more wealth in the old farm than its owner dreams, and a better management may enable him to unlock its treasures.

Perhaps deeper plowing is needed to break up the hard pan, formed by running the plow nose four inches below the surface for a century. Perhaps two-thirds of the manure is wasted, and there may be a loud call to stop the leaks. Perhaps the cattle are foddered at the stack all winter, and there is a dead loss in the extra consumption of hay of ten dollars for every head of stock. Perhaps the best part of that farm is still under water, for half the year, and it only needs a little draining to turn a waste into a fruitful meadow.

A few changes of this kind in the management of a farm make all the difference, between success and failure, riches and poverty. As a rule, it is much better for a farmer to change his management than to change his location. We have observed many of the latter kind of changes, and

seldom found them profitable; but the other kind pay well. Our advice then is to drive down the stakes a little deeper where you are, and persevere until you conquer. Such a conquest is glorious. We had rather take such a man by the hand than the Governor of a State, or a Member of Congress. He has the stuff in him to rule an empire; for, as a successful farmer, he has already conquered a small one.

What of the Apple Pie Melon?

We can hardly answer. Some unknown friend sent to our office a large specimen, just as the Dec. No. went to press. It was taken home and cooked as per directions given in October. The pies were fair, but not quite equal to the genuine apple. They would pass very well, however, where apples could not be got, and when seed can be obtained without paying too much for it, we would not discourage planting. We attempted to raise a quantity the past year, but had poor success. Not more than five in a hundred came up. Those that did, made a good growth of vine, but no fruit set until too late for it to mature. An associate secured a large growth of vine, and a small yield of mature melons of fair size. Others tell of getting six to ten large melons from a single plant. This is all we can say of it yet.

How our Forests are being Preserved.

In the older States it is a sad spectacle to see the waning of the woodlands. One can hardly visit the home of his youth after an absence of twenty years, without missing some favorite forest haunt of his boyhood. The chestnut trees he used to climb, to shake down the nuts in the frosty mornings of Autumn, the tall walnuts from which he shot the squirrels, are as dead as the game he killed in his youth. There is a barren rocky pasture on the very ground once shaded with oaks and elms, and desolation reigns amid the scenes of former splendor and glory. One can but deplore the fall of these forest monarchs, and the clearing up of lands that a wise economy would always keep in wood. They are too rocky for tillage, while other lands in the same neighborhood, free from stone can be had in any desirable quantity for a few dollars an acre.

The introduction of steamboats and railroads, the increase of our population, and the wasteful methods of cutting and using fuel, are among the chief causes of this waning of our forests. The evil reached its height in New-England, and in the middle States some fifteen years ago. There are now symptoms of amelioration, and with the diffusion of knowledge upon the proper treatment of forests, the evil we trust will be arrested, and these auxiliaries to good husbandry will be preserved. If the forests in the States we have indicated, were properly located, it would not be desirable for farming purposes that they should ever be diminished. The land already in tillage would yield larger crops in a series of years, than the whole land would yield stripped of its forests. The importance of shelter from the prevailing winds of Winter and Spring, is beginning to be understood. Woods also upon the high lands are reservoirs of water, and have much to do with the equal distribution of rain and moisture through the Summer. Lumber is increasing in price, and the owners of woodland find it an object to husband the timber that was once devoted to the fire.

The introduction of coal has had a very important influence in saving the woodlands. The steamboats upon tide water, that once used wood altogether for fuel, now use coal exclusively. The locomotives are beginning to look in the

same direction, and we trust the day is not distant when coal will supply this want on all our railways. The cities and villages on navigable waters, and many of those on our railroads, are already supplied with their fuel from the coal mines.

But the working of our iron mines has befriended our forests even more than coal. Stoves and fire frames of all shapes and sizes to save fuel, have been introduced extensively into all parts of the union. There is hardly any department of human effort where more brain work has been expended, than in these contrivances for economizing fuel. The greatest amount of heat with the least expenditure of fuel, has been the problem that has absorbed the attention of the nation for the last twenty years. It has received the notice of men of science and practical skill, of reverend divines, and college professors. It has been often solved, and every new stove, furnace, or range, brought out in this time, has been, in the esteem of its inventor, the solution of the problem—the *ne plus ultra* of heating apparatus. With all the failures, and they have been many, there has been immense saving in the consumption of fuel. An average farmer's family does not use one fourth the fuel consumed fifty years ago.

Besides these sources of economy in the use of wood, there has been a very great improvement in the construction of our houses. Both in their arrangement, and in the thoroughness of their building there is a marked advance upon the old style of farm house. The chimney has shrunk into comely proportions, and no longer takes up a fourth part of the house.—Ventilation is no longer provided for through the doors, windows, and chimney flue, but is regulated by a register. The joiner's art has wonderfully improved, and windows let in light without air, and doors only let in the wind by special request when open. The heat is saved for in-door use, instead of passing off into the atmosphere.

The use of coal, of stoves, ranges, and furnaces, and improved dwellings, all tend to save the forest, and the farmer, who finds his woodland decreasing, may possibly find a remedy in one or all of these expedients. Many farmers in the vicinity of seaports, and near navigable waters, can now heat their dwellings cheaper with coal, than with wood. The innovation has already commenced. A good stove for the kitchen or parlor will often save its cost in fuel in a single season. The carpenter's bill for repairing an old house, putting in tight windows, doors, and floors may be paid by the saving in fuel in a few years. Wood at four dollars a cord, and two more for the labor of cutting and fitting for the fire, soon sums up to a hundred dollars.

But there is another influence at work, more important than any of these, in its bearing upon the preservation of the forest. The great plea for clearing woodland has always been the need of more land for the purpose of tillage. The farmer has found his old lands under the skinning system of cultivation, continually running down, and he has looked to the new lands, covered with wood, as his only resource to keep up the productiveness of his farm to the old standard. Now it has been discovered that the old acres, by deeper plowing and higher manuring, can be made to double or treble their crops at the farmer's pleasure, so that he has no need to enlarge the surface of his plowed fields, but only to deepen them. Thousands upon thousands are acting upon this suggestion, and thorough tillage is now actually doing more for the minds of our farmers than it is for their farms, great as the change is. Multitudes have waked up to a new

existence within the last few years, and begin to have unbounded faith in the capacity of their acres to produce food for man and beast. Three tons of hay to the acre, eighty bushels of corn, two hundred of potatoes, thirty of rye and of wheat, a thousand of carrots and of turnips, are the every day facts of improved husbandry. We do not want more acres under the plow, but the plow more under the acres we already have. Thorough tillage will give us bread enough and to spare, and save the forests.

For the American Agriculturist.

Country Burying Grounds.

"A sleeping place" is the signification of the Greek word (*koimeterion*) from which is derived our term Cemetery—a designation at once appropriate and suggestive, and exhibiting the taste which marked that refined people. In many sections, burial grounds resemble anything but sleeping places. Situated often in some waste corner, where thistles, brambles, and other foul weeds find a secure shelter, or upon a bleak hill side where nothing will grow, surrounded by dilapidated fences, and defaced by mutilated headstones, they look as if contrived purposely to heighten the gloom of the grave, and to make Death still more an object of terror. No wonder the frightened school-boy hurries past such a desolate place, and is haunted with fear at the prospect of being finally deposited there. Where grounds are thus generally neglected, those who would love to adorn the graves of their kindred are deterred from the attempt, or if trees are set, and flowers planted, marauding sheep and envious weeds soon destroy the tokens of affection.

Private plots are sometimes set apart upon the farm, where each family may see that at least decent respect is shown to the memory of relatives. But farms frequently change owners, and these spots, once held sacred, are regarded as incumbrances and eye-sores by the new occupant, who can scarcely be expected to keep them as they should be kept. This common neglect of rural cemeteries has been called "heathenish," but the Greeks, the Romans, and the Egyptians committed no such barbarism. Their cemeteries, where burning of the dead was not practiced, were beautified and made attractive, and the remains of their friends were in all cases preserved with scrupulous care.

Latterly the subject is receiving more general attention. New-York, Boston, Philadelphia, and most large cities in the United States have now extensive grounds dedicated to this purpose, properly laid out and beautified, and numerous villages are doing the same thing. In rural districts, where land is comparatively cheap, it is easy to carry out such an enterprise—it only needs some one to start it. After the matter has been presented to individuals, let a meeting be called for discussion, and a committee appointed to report upon a site, probable cost, etc. At subsequent meetings it can be ascertained how many, and whether enough, will take plots sufficient to warrant purchasing land. Much difficulty will be avoided by having this paid for at the start; then the future income can be devoted to regulating, setting out trees, and keeping in order. In many instances grounds already occupied, are suitable, and only need improvement. There is no reason why the cemetery may not thus be made a most ornamental and attractive spot, but every reason in its favor. A frequent walk among the memorials of the loved dead will recall lessons too often forgotten, and the thoughts of the departed will be all the pleasanter when

amid the flowers we have planted around their graves, and the singing birds that make their house in the trees we have set. **RURALIST.**

Tim Bunker on giving Boys a Start.

MR. EDITOR: "Be sure you're right then go ahead." Davy Crockett got out considerable truth when he started that proverb. I guess it is about as applicable to starting boys in life, as it is to starting land on a right course to make it profitable. Now you may take poor, run-down land, and plow it, and crop it, as much as you have a mind to, and you can't make it pay for the labor of working. It needs the right start to begin with, and then you can go ahead and get pay for cultivating.

Now a great many folks make the same mistake with their boys, that I did in working Mrs. Bunker's dowry lots, until I begun to turn in green crops. They don't give 'em the right start. A good many work their boys till they are twenty-one, and then send them off to shift for themselves, without capital, and without any experience in the earning and use of money. They stint them on schooling in the latter part of their minority, because their work is worth as much as a man's. They seem to have as little regard for the future welfare of the boy, as they do for their land when they get all they can out of it without putting on any manure. They pay very little attention to their morals, and before they know it, the boy has learned to chew tobacco, smoke, drink, and swear, and perhaps to rob water-melon patches, and hen-roosts. He comes up to manhood a Kier Frink, fond of low company, and ready for any mischief that offers. They do not see their mistake until it is too late to mend it.

Now you see, to give boys the right start, you must begin early with them. If you don't get right notions into their heads before they are twenty-one, I guess you might as well give them up. You can't begin too soon to cultivate their hearts, and to teach them to respect the rights of their Maker and the rights of their fellow-men. Some seem to think it makes no difference what sort of principles a young man adopts, or what habits he forms. I have lived long enough to see that there is nothing pays so well in the long run, as correct moral habits. These make a young man entirely reliable, and his friends can trust him in any business. Any one of the vices, to which so many boys are addicted, is a great pecuniary damage. It is just like contracting a heavy debt at the beginning of life, and having to pay interest all through. You may safely put down the use of tobacco as a debt of five thousand dollars, the use of intoxicating drinks as five thousand more, and swearing, lying, and theft, at about the same figures. A young man wants nothing so much, when starting in business, as the confidence of his fellows. This must be based upon his character.

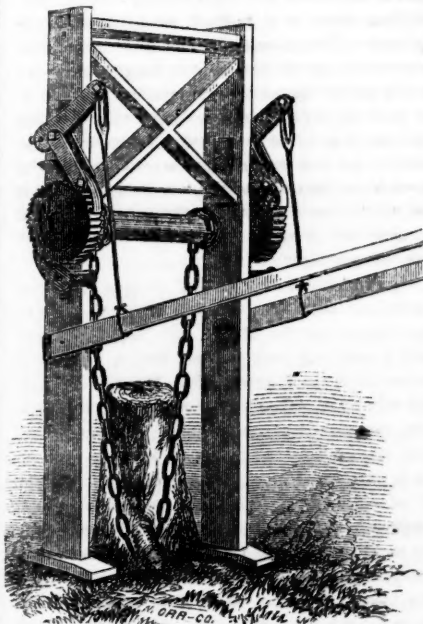
But when we have got a boy's heart and morals all right, there is something else to be done for him. A man, however upright, will not succeed without industrious habits, and a knowledge of the value of money, which is one of the best incentives to industry. There is only one way in which we can estimate money at its proper value, and that is to earn it. A silver dollar represents a day's work of the laborer. If it is given to a boy, he has no idea of what it has cost, or of what it is worth. He would be as likely to give a dollar as a dime for a top, or any other toy. But if the boy has learned to earn his dimes and dollars by the sweat of his face, he knows the difference. The painful stretch of his muscles through the long rows of corn, or at the plow tail, is to him a measure of values, that can

never be rubbed out of his mind. A hundred dollars represents a hundred weary days, and it seems a great sum of money. A thousand dollars is a fortune, and ten thousand is almost inconceivable, for it is far more than he ever expects to possess. When he has earned a dollar, he thinks twice before he spends it. He wants to invest it so as to get the full value of a day's work for it.

It is a great wrong to society and to a boy, to bring him up to man's estate without this knowledge. A fortune at twenty-one, without it, is almost inevitably thrown away. With it, and a little capital to start on, he will make his own fortune better than any one can make it for him. The most of the capital they need to start with, they might earn in their minority. It is better for farmers to pay their boys regular wages, beginning, say, when they are fourteen, and teaching them how to take care of it, than to give them a much larger sum when they are of age. The seven year's wages, if put in the Saving's Bank, in annual investments, would come to over a thousand dollars, and with this, and a good character, and industrious habits, a young farmer's fortune is secure. That is double the capital I had to start with; but then I had Sally Bunker for a wife, and the like of her is better luck than common mortals can expect.

Yours to command,

Hookertown, Ct., Jan. 15] **TIMOTHY BUNKER, Esq.**



A New Stump-Puller.

In many parts of the country, a cheap, portable, effective implement for extracting stumps, is a great desideratum, and a number of forms have been brought forward. To keep our readers posted on what is doing, we present herewith an illustration of the latest machine designed for this purpose. The engraving was prepared expressly for these columns. Not having had opportunity to see the machine in actual operation, we cannot speak from practical observation as to its utility. From its construction, it would appear to have power enough at least, and we have been furnished with the testimony of several farmers, who speak in high terms of its operation. The inventor names it the "Hercules Stump Puller." In preparing the engraving we have endeavored to make its construction so plain as to be readily understood without particular descriptions. It will be

noticed that the chain winds around the shaft or windlass. This is turned with great power by means of the compound levers acting upon the ratchet wheel. The implement can be readily moved about by laying it on an axle between two wheels—taken from a wagon.

For the American Agriculturist. Hints on Board Fences.

[The following article was furnished partly as a critique upon the method of building board fences, described by the writer of the prize articles in last volume. We omit the special criticism, and give the writer's description of what is considered the best mode of building this class of fence in his section of the country, having respect to economy, strength, and durability.—Ed.]

Posts.—The most durable kinds of wood that we have, are locust, cedar and oak. The variety called the swamp white oak is considered the best, though the upland white oak is often used. Of cedar, the red is far preferable to the white. The locust is better than all others: and here I would observe that, if farmers would pay more attention to the raising of the locust, they would soon find it much to their interest. The locust grows rapidly; and if set out by the road-side, or on rough, stony, or otherwise unprofitable parts of the farm, they would in a few years be amply repaid for the labor and expense. On the road-side they are ornamental, and fragrant in the season of blossoms, and give a pleasant shade. Fifteen years' growth will make from three to six or eight posts to each tree—the most durable of any timber in our country. As evidence of its durability, I may mention that a friend of mine visited his native town in Massachusetts, and there examined a locust post that had been in the ground, according to tradition and actual knowledge, for seventy years, and it was still in a pretty sound condition. In this country, where the tree grows very rapidly, it is not expected to be as hard and durable as near the salt water, on a light and generally more sterile soil; still it is superior to any other, and easy of cultivation.

For a good strong fence, and none other should ever be made, the posts should be set not to exceed six feet apart. If the boards are only fourteen feet long, then one post in the center will do; but if they are sixteen or eighteen feet in length, two intermediate posts should be used. Two and a half feet is a proper depth to set the posts, and after they are thus set, and before the boards are put on, an embankment should be thrown up around the posts of from six to ten inches high at least; more than this would be better. The surface at the center of the embankment, or along in a line with the posts, should be made level and smooth; this can be done before putting on the boards, much easier, quicker, and cheaper than at any other time. The team can pass between them, and draw the plow without hindrance. The benefit of this ridging is obvious; it secures the posts to a greater depth in the soil; it makes an even surface for the bottom board; it stops up all hog-holes, and causes the water to pass off more freely from the fence to the ditches on each side. The ditches should be about two and a half, or three feet from the center, each way. Having set the posts, and leveled the ridge or embankment, then proceed to face the posts (if split from the log) with a common narrow ax. As they are held fast in the ground at one end, a man, with a little mechanical ingenuity and a good eye, can easily and quickly do this with sufficient accuracy. If the posts be sawed, no other facing will be necessary.

In nailing the boards upon the posts, the most

common practice is to break joints, and, if no caps are designed to be put on the fence, this, undoubtedly, is the better plan; but to secure a durable and strong fence, it is better to make each panel separately; select the broadest, widest, and best posts for the ends of the panels, and set and secure them in the ground first. By doing this, you will be more likely to get the fence straight, and less care will be needed in placing the intermediate posts. An inferior intermediate post will answer the purpose, perhaps, as well as the best. If your ground is uneven, as up hill and down, a fence, when completed, will have more symmetry and beauty.

Height.—Four feet above the embankment is high enough for any fence. This height is fully equal, in effect, to one of four and a half or five feet, when built in the ordinary manner.

Width of Boards.—There is, I conceive, a stereotyped error in graduating the width of the boards; that is, putting a wide one for the bottom, and narrower ones as you approach the top. The better plan is to have them all of the same width, and that width five or six inches only; it is desirable to have frequent open spaces, that the wind may pass through more readily, and not to have so great a width of board resting upon the post at one point, holding moisture and causing it to rot much sooner. For this reason, also, split posts, as a general rule, are preferable to sawed ones. Select one having a pretty wide face, for the ends of the panels to be nailed to, and all the others trim in such a manner as to have as little surface touching the board as possible—one inch surface, or even less, to nail to, is better than four or five. Battens also induce rot; if used at all, they should be put only over the ends of the boards where the panels come together, and be only about four inches wide. For an extra strong fence, a board should be nailed on each side of the posts at the top, and after all the posts are sawed off level, put a cap on, and nail it securely to both boards, as well as to the top of the posts, observing to break joints by placing the center of the cap over the post where the panels meet; this gives the whole strength of the cap edgewise in keeping the fence stiff at the top. In doing this, it will be perceived that the first cap must be sawed in two in the middle, and put on first, then all the others at full length will break joints over the proper post. It is not necessary that the ends of the caps should come together over the end of a post; it would be best not to have them do so, for the reason that when a whole board is made to cover the end of the post no water can get to it, to cause it to decay. Where the ends of the caps come together, more or less water will in time pass through the joint. One word as to putting on the caps. Before commencing the operation, see that the top of the fence is straight; if any variation from a straight line is noticeable, crowd the post in or out as the case may be, and secure it there by temporary braces. After this is done, nail on the first cap of half length, then put on the second cap, and let the end of it lap over the first, half an inch or more, and nail it securely also, except three or four feet from where the lap is. Then pass a saw through both caps where they come together, giving it a slight inclination from the perpendicular or right angle, and pass it through both boards, and when the short pieces are removed, the ends come together with a perfect joint; then nail them to the very ends.

The nails proper for a board fence should be of different kinds and sizes. If hard wood is

used for posts, the eight-penny fence nails are large enough; but if soft wood, as the white cedar, then a larger sized fence nail should be selected, and for putting on the caps, the common eight or ten-penny nail will answer the best purpose, and will be cheaper, as there are more of them to the pound.

The strength and practical benefit of a fence made in the way just described, has been fully demonstrated within my own knowledge, and I can recommend it in the confident belief that it will fully answer the most sanguine expectations.

If the ground be wet and springy, or a heavy clay soil, in which the posts when set will be liable to heave, and eventually be thrown out of the ground, the better way will be to dig a ditch at once, two feet and a half deep, and set the posts into it, at proper distances, and fill up the ditch with small stones; or, if they are not convenient, lay in the tile pipes in the same manner as for a common tile underdrain. Or, if neither can be had, brush or bits of rail, or anything placed in the bottom of the ditch that will lead off the water, will answer the purpose; observing, at the same time, to have a free outlet for the water at all points where it may collect in the lowest ground. This, with the small embankment, and its ditch on each side, will effectually secure the posts from ever being raised out of ground by the action of the frost. The ditch can be made almost, or quite as cheap, as to dig the post holes separately, and at the same time you will have a good underdrain.

With reference to the kind of lumber most suitable for fence boards; pine is the best, hemlock next, and these should be sawed full an inch thick. But when oak, beech, hickory, maple, ash, or elm is used, the boards should be sawed much thinner. Five-eighths or three-fourths of an inch is thick enough, for the reason that all these different kinds of wood will warp very much in the sun; and if thick, say an inch or more, there will be so much strength in them that they will draw the nails or split in warping. But if thin and narrow, they will keep their places much better, and are sufficiently strong for all practical purposes.

DANIEL A. ROBINSON.

Cayuga Co., N. Y., 9th mo., 1859.

Advertising Information—Gratis....VIII.

During the past few weeks of our business season, we have had little time to devote to investigating the operations of the advertising fraternity; nor have we thought much attention to this subject needed. The revelations already made in these columns have pretty well posted up our readers in most of the "dodges" hitherto adopted—an indication of the attention awakened by our articles, is found in the fact that they have forwarded to this office recently an immense number of circulars, etc., sent out to various parts of the country, by the humbugging gentry. Our articles have been widely copied or noticed by other journals, and so wide awake have people become, that the swindlers are beginning to find their advertisements less profitable. Until recently, we could gather twenty or thirty suspicious advertisements from the papers in every week; but the number has been greatly reduced lately. We intend to follow up the subject as far as needful, and to be on the watch for new developments, which will, doubtless, continue to come up. We must beg our readers, who have contributed so largely to our stock of materials, to wait a little. Their contributions will be attended to whenever there

is a new swindle to be exposed. We will now complete

(No. 26. Continued from page 6.)

32. OIL PASTE BLACKING.—Take oil of Vitriol 2 ounces, Ivory Black 1 pound, Molasses 5 ounces, Tanner's Oil 5 ounces: mix the vitriol and oil together, and let it stand a day; then add the Ivory Black and Molasses, and stir it well together, till it makes a thick paste.

[Remarks.—A year or two since, a man in Connecticut paid \$2 for this recipe to a traveling cheat, who exhibited the blacking, and sold the recipe. The purchaser forgot to ask about the "ivory black," and came all the way to New-York to find it. He was referred to this office by some one he called on, and after examining his blacking samples, we had to tell him that, although the blacking would polish boots well, it would ruin the leather, as will any other blacking, which contains oil of vitriol (sulphuric acid, and this is the case with a majority of the "blackings" sold in the country. We always test blacking before buying, by holding it upon the tongue; or better still, by dissolving a small bit of cooking soda in water, and putting a little blacking in. If it boils or ferments, it shows the presence of acid, which is injurious to leather. The molasses often hides the taste of the acid, so that the soda test is better than tasting. We repeat that, though the above preparation makes a glossy blacking, it is not a safe preparation for leather.]

33. TO PRESERVE METALS FROM RUST.—Take some melted beeswax and rub it over the article to be preserved. When dry, warm the article again, so as to get off the wax, and rub it with a cloth until the former polish is restored. By this means, all the pores of the metal are filled up, without injury to the appearance, and rust will not attack it, unless very carelessly exposed to constant humidity.

[Remark.—A far better material than beeswax is made by melting about three ounces of unsalted lard with one ounce of common resin. This rubbed on metallic surfaces, will preserve them from rust. It is simple, cheap, and effective. Knives and forks, plows, and all implements and tools of any kind may well be coated with it, when laid aside for however brief a season.]

34. BLACK & RED SEALING WAX.—Rosin, Beeswax, Pitch, and Ivory Black, melt together, and while warm, dip your bottle in and set aside to cool. For Red, use English Red.

[Remark.—Very definite information! We will supply the lacking instruction as to the amount to be used, viz.: Take rosin (resin), bees wax, pitch, and ivory black, of each a quantity as large as a piece of chalk. Experiment for a week, until you get the right proportions. When you find the stuff still as brittle as glass, then add Venice turpentine, and you may get a usable article.]

35. COLOGNE WATER.—One ounce each of oil rosemary, of jessamine, and oil bergamot, 10 drops otto rose, to a gallon proof spirits—mix.

[Remark.—This will make a Cologne water—we can not vouch for its quality—that will depend upon individual taste, or smell. Any scented water or alcohol is called Cologne water, now-a-days.]

36. HAIR RESTORATIVE.—Take one ounce of palma-christa oil, add oil of lavender to scent it: let it be well brushed into the hair twice a day, for two months. An excellent oil.

[Remark.—There's every thing in a name—sometimes. "Palma-christa oil" translated into English, means castor oil—an excellent oil for physic. If your hair needs physic—twice a day for two months, don't fail to use this restorative—if not, not.

37. CURLING LIQUID FOR THE HAIR.—Take two ounces of scrapings of lead, quarter of an ounce litharge of gold, one drachm camphor; boil the whole in a pint of soft water for half an hour; when cold, pour off the liquid, and add to it a drachm of the sugar of lead, and a drachm of rosemary flowers; boil these up together, and strain off the liquid, when it is fit for use.

[Remark.—If any body's hair would not curl, after such an application, it certainly can have not the slightest strain of African blood in it. But we fear we shall have to send another dollar to find out what "litharge of gold" is. We know that litharge is an oxide of lead, used in drying paint, but "litharge of gold" puzzles us.]

38. EXCELSIOR HAIR OIL.—Take one gallon cologne spirits, 90 per cent proof; add of the oil of lemon, orange and bergamot, each a spoonful; add also of the extract of vanilla, 46 drops; shake until the oils are cut up, then add one and a half pints of soft water.

[Remark.—About as good as many of the cheap "hair oils" sold in bottles, we suppose. After the above is "finished," what does it amount to but scented strong whiskey, or diluted alcohol? We suspect this was put in to make up the "fifty methods." Its use on the hair would be of more injury than good.]

39. CELEBRATED TOOTH POWDER.—Prepared chalk, four ounces; alum, two drachms; cream tartar, two ounces; white sugar, one ounce; orris, one and a half ounces—mix.

[Remark.—Omit the alum and the cream of tartar, and the above will do very well. Generally, a stiff brush and simple water, or a little hard soap added, is the best tooth cleanser.]

40. COUGH SYRUP.—Take 30 drops of laudanum, 25

drops of ipecacuanha wine, and mix with a desert spoonful each of vinegar and honey for a dose.

[*Remark.*—We hope none of the purchasers of the "fifty methods" have been foolish enough to take the above dose—it is prescribed on the "kill or cure" plan entirely, with rather too much of the "kill" in it.]

41. **UNIVERSAL LINIMENT.**—Take one fluid ounce tincture of opium, and one fluid drachm tincture of iodine—mix.

[*Remark.*—Ask your doctor what he thinks of this "universal" affair.]

42. **SUPERIOR PAINT FOR BRICK HOUSES.**—To lime whitewash, add for a fastener sulphate of zinc, and shade with any color you choose; for yellow paint, add yellow ochre; for red, add venetian red, &c.

[*Remark.*—The value of sulphate of zinc (white vitriol), in whitewash, has recently been discussed in this journal. The above is nothing more than a common whitewash, with coloring matter added to shade it. The sulphate of zinc changes a part of it to sulphate of lime (Plaster of Paris), and for inside work makes the material stick a little better than the ordinary lime wash. See last volume, pages 118, 136, 197.]

43. **PAINT FOR ROUGH WOOD-WORK.** Six pounds melted pitch, one pint of linseed oil, and one pound of yellow ochre.

[*Remark.*—We can not say as to the above—if good at all, we think there is too little oil prescribed.]

44. **BEST VARNISH.**—White wax, 15 ounces; yellow resin, one ounce, powdered; turpentine, one quart; simmer till dissolved; apply with a cloth, and polish with a clean piece of woolen.

[*Remark.*—Better get from a dealer the kind of varnish and the quantity required for any particular work.]

45. **LEATHER VARNISH.**—Boiled oil, 32 parts; Spirits of turpentine, 4 parts; beeswax, 2 parts; resin, 2 parts; Venice turpentine, 2 parts; mix and use while hot.

[*Remark.*—We are not "footed up" on the varnish question, and the above may be good for ought we certainly know, but we should want better authorities for it, than the source from whence it comes.]

46. **ALMOND SOAP.**—Best white tallow soap, 50 pounds; essence of bitter almonds, 20 ounces; melt by the aid of a steam or water bath.

[*Remark.*—An impracticable, costly recipe, we think.

47. **FANCY SOAP.**—Dissolve two ounces of Venice Soap in two ounces of lemon juice; add one ounce oil of almonds and one ounce oil of tartar; mix and stir it till it has acquired the consistency of honey.

[*Remark.*—We fear another dollar must be sent to learn what "oil of tartar" is; we don't know, having never heard of it.]

48. **MACASSAR OIL.**—Olive oil, one pound; oil origanum, one drachm; oil rosemary, one scruple—mix.

[*Remark.*—This is probably as good a preparation as nine tenths of the "Macassar oil" sold in the country—it being essentially sweet oil (olive oil) scented to your liking.

49. **BUFFALO OIL.**—Take best lard oil, and perfume it well with equal parts of oil garden lavender and oil lemon.

[*Remark.*—This we should call hog oil, rather than "Buffalo oil"—but then it matters little. Lard oil, well scented, may be sold under any name you choose—the good quality and the usefulness of these market hair oils depends more upon the name on the outside of the bottle, and your faith, than upon the quality of the article inside.]

50. **LAVENDER PERFUMED WATER.**—Two ounces oil garden lavender, one drachm essence ambergris, six drachms oil bergamot. Mix with two quarts and a pint proof spirits.

[*Remark.*—Then this appears to be not a lavender water at all, but an alcoholic mixture—pretty strong of oil, and rather costly.]

Though we paid all that was asked, we beg to tender our most grateful thanks to the sender of the "fifty methods of making money;" he only promised us fifty methods, and who says we have not got them; but how unlike the rest of the world, this man, for he generously sends us two more than promised! Here they are:

51. **FLORIDA WATER.**—Half pint proof spirits, two drachms oil lemon, half drachm oil rosemary—mix.

52. **NON-EXPLOSIVE BURNING FLUID.**—Take 5 quarts alcohol, 1 quart camphene, and 2 ounces pulverized alum; mix, and let it stand 24 hours. If transparent, it is fit for use; if not add sufficient alcohol to bring it to the natural color of the alcohol. The cover of the lamp must fit close, and a tin stopper be kept over the tube, when not in use, to prevent evaporation.

[*Remark.*—We take back our thanks above expressed. This last is nothing more than the common "burning fluid" with the doubtful addition of a little alum.]

And here endeth No. 26. Our readers will do well to preserve this list. If it would not spoil the copy of the paper, we would advise to cut the above 52 "methods" into separate slips, and put them in a box, or shake them up. Then whenever any one advertises some wonderful recipe, just thrust a hand into the box, and draw out one; it will be quite as likely to be useful, as the thing advertised—and perhaps will be the same thing, under a different name.

For the American Agriculturist.

Head Work.

If a man is really a boor he will pass for nothing more, and if he is at heart a gentleman he will pass for nothing less; if he is an ignorant plodder, men will treat him as such, and if his brains are well cultivated, others will not be slow to find it out; so that those who do not command respect, have themselves to blame most. A young man in these days has no more right to have an idle head, than an idle body; neither ought he to so overwork his muscular system that there is no more nervous energy left for the brain, and as a consequence feel so dull and stupid, that he has no desire to open a book. It is preeminently the day of physical science. The Classics are giving way to rocks, and plants, and the elements with which nature performs her wondrous work. The "Study" is changed from the closet to the field, and here the farmer can, and ought to be, even with all. A few text books, and much close, thoughtful observation, will do more towards balancing mind and muscle, more towards making farmers men and gentlemen, than all the harangues on the dignity of their calling ever uttered.

Turn back the leaves of the great book on which you tread, and read in the rocks the history of long gone by creations; Trace the tree from embryo to perfection; observe clouds and storm, wind and sunshine, and find even these erratic visitors of the air subject to law; turn up the soil, and with a chemist's eye mark the changes of the mold under the influence of rain and manure. Carry out these ideas, and see as your brains get used to working, if you don't soon feel the result all over,—a lightness of heart and a sense of equality in whatever society you may be thrown. "Awake thou sluggard, and arise thou that sleepest."

LOVER OF THE FARM.

Grasses, and their Importance.

The high price of hay this winter, reaching in some places twenty five and thirty dollars a ton, leads us to notice the great importance of this crop. The hay crop of 1850 was estimated at not quite 14 millions of tons, worth in the aggregate at least 150 millions of dollars, and the grass crop from the pastures is worth as much more, making three hundred and fifty millions of dollars, as the annual yield of our grasses. This is none the less valuable, because it is mainly consumed at home. Indeed as a rule, it will pay a farmer a larger profit to use up all his grass and hay upon his own premises, than to sell it at the market price. This is the most economical method of increasing the productiveness of his farm. If all the hay be consumed at home, it will make a large heap of manure if it be saved, and this will bring larger crops of hay, grain, and vegetables, to feed yet larger numbers of animals. The outside limit of the productiveness of the soil has not yet been reached by the most skillful cultivators. The hay crop for the country does not average a ton to the acre. Some farms average three tons, and single acres are known to produce four and five tons. There can be no doubt, that most farms can double their present yield of grass and hay, to the great pecuniary advantage of the owners. They want more of these crops, and cannot farm successfully until they have them.

For dry uplands, an occasional cropping with grain and roots, as now pursued, will no doubt be advisable. These crops, however, should be accompanied with much larger quantities of

manure. Instead of the ten and twenty, there should be thirty and forty loads to the acre, on poor soil. With occasional exceptions the plow, also, should be allowed to run deeper,—ten, twelve, and fourteen inches, instead of four, five and six. The grasses are as much benefited by a deep loose soil, as other crops. Thicker seeding would also be a great advantage in many cases. Three and four dollars a bushel for herds-grass, and twelve cents a pound for clover seed, seem large prices, and there is a temptation to stint the quantity, which many farmers do not resist. But the best land will not bring a full crop, unless it is well stocked. A half bushel of herds-grass seed, or three pecks of red top is none too much per acre. A man should economize in any other place, sooner than in the seed sowing.

But the best lands for grass are those which are naturally moist, swales of reclaimed swamps. If these are properly drained, they may be kept in grass without plowing. Lands that have a large per cent of vegetable matter in them, peat and muck swamps, are greatly benefited by a top dressing of fine gravel, or loam from the adjacent uplands. If the surface is cleared of brush, and made smooth, the grass seed may be sown immediately upon the gravel, without harrowing or brushing. The most of it will catch. Even if the ground is so soft for carting in summer, the gravel can be put on when it is frozen. The seed be sown any time in February or March. Draining, so that the water will not stand anywhere within a foot of the surface, is essential to the highest success. Two feet or more would be better still.

Such lands will ordinarily bear large crops of grass, from two to three tons to the acre, and may be kept in a high state of productiveness, by a top dressing of good compost once in three years. They are worth more for grass than for any other crop, and they will pay better for good husbandry than any other part of the farm. *

For the American Agriculturist.

Village Wastes.

A great amount of fertilizing material may be gathered at this season from the Village. The writer knows of large farms, once poor and exhausted, that have been brought up to a high state of productiveness, by the application of these wastes.—The contents of privy-vaults are the most valuable of those fertilizers, and they are generally to be had, for the carting. They are extensively used in the neighborhood of large cities, for the manufacturing of poudrette, and, when well made, this is a valuable fertilizer. But any farmer, living within a mile or two of a village, can have a home-made article at much less expense. It has a much higher value than stable manure, some estimating it to be worth four times as much.

In cold weather it can be carted without public offence. There are several contrivances for transporting it. One is a common ox, or horse-cart, made as nearly water tight as possible, with a partition in the middle, sliding up and down, like the gate of a mill pond.—This is put in, to prevent spilling, when going up or down hill. Another apparatus, is a water tight box, made of stout pine timber, just large enough to fit inside of the cart. The hind part is furnished with three or four two inch holes, stopped with wooden plugs. The top has a lid, or trap door, just large enough to admit of convenient filling. This is closed as soon as the box is filled. The liquid contents may be used to top dress meadows, but

a better method is to drop the whole, upon a bed of peat, or muck, or even of loam, prepared upon the field which is to be planted next season. One load of these wastes, to four or five of muck, makes a powerful fertilizer.—The box is emptied by pulling the plugs. CONNECTICUT.

Scientific and Practical Talks about Manures...II.

In the previous chapter it was shown that the great bulk of all plants, comes from the air—that the charcoal in a tree or plant, for example, cannot come from the soil, because it does not exist there. (By plant we here mean all kinds of plants that grow—grasses, grains, trees, etc.) We know that some air-plants have no roots reaching to the soil, to extract food therefrom, and that they must necessarily draw their sustenance from the air. With respect to most plants, there is a difference of opinion as to the relative amount of food taken in through the leaves directly from the air, and the proportion received indirectly through the roots. Some even contend, that while the plant food comes mainly from the air, yet that it is all first washed down into the soil by rains and dews, or absorbed from the air circulating in the surface soil. Without discussing this point, we may say that all agree that a *portion* of the plant's food is absorbed through the roots. The object of manuring is to increase the amount of food in the soil to be taken up by the roots, for it is evident that, so far as field crops are concerned, it is not practicable to materially add to the amount in the air, to be taken in directly by the leaves. It is then pertinent to our subject to inquire: What kinds of food are taken into the plant *through the roots*? Where and how are these materials to be obtained most economically? In what form, and how, and when, are they to be applied? To answer these questions, we must first consider

WHAT PLANTS ARE MADE OF.—Take ten pounds of dried wood, or straw, or of any vegetable substance whatever; heat it away from contact with air, and the result will be four to six pounds of charcoal (*carbon*)*. A piece of flesh heated in the same manner, will give a like result, as is seen in the charring of meat. Cover a pile of wood as in a coal-pit, and burn only enough of it to heat the rest, and while you drive off only watery vapor, with a little of an invisible gas (nitrogen,) you will have nothing but pure charcoal remaining, except a little earthy material (ashes,) which would be left if the charcoal were afterward burned in the open air. Precisely the same result would be obtained if you put in the place of the wood, a quantity of straw, or grain, or leaves, in short of any organic (animal or vegetable) material. The whitish vapor escaping is nearly pure water, as will be found by catching some of it in an inverted vessel, as it escapes, or by holding a cold glass or metal over the coal pit to condense the vapor. This vapor is called smoke, but—except when the upward current of air is so great as to carry up unconsumed particles of charcoal, which give a darker color—the so-called smoke is chiefly water, while, as before remarked, only charcoal is left. Burn or

* **CARBON**, an element entering largely into all living substances, whether animal or vegetable, is seen in its nearly pure state in common charcoal.—**OXYGEN**, an element constituting fully half of the entire substance of the globe, mineral as well as organic, is never seen in its pure, uncombined state, for in this state it is a transparent gas, like air. It enters into combination with other substances, and becomes invisible, just as lime is invisible when combined in mortar.—**HYDROGEN**, which forms one-ninth part of water, and enters largely into many organic substances, is also an invisible gas, when not combined with some other element.—**NITROGEN**, which forms seventy-nine hundredths of common air, and also enters into many organic substances is likewise an invisible gas when in its pure state.

char a piece of meat in a covered frying-pan, and you get a bulk of charcoal about as large as the original piece of meat. The same is the case with over-toasted (charred) bread, potato, etc.

These illustrations show that all organic substances—all vegetable and animal matters except the bones—are really and truly made up almost entirely of charcoal and water, with a small quantity of nitrogen which is itself one of the component parts of air—the air we breathe being made up of about 79 parts (by weight) of nitrogen, united with 21 parts of oxygen.

But water is itself a compound body, being made up of 8 parts (by weight) of oxygen, united with 1 part of hydrogen. Now as vegetable substances when heated, are converted into charcoal (*carbon*), water, and air, and as air is made of oxygen and nitrogen, and water is made of oxygen and hydrogen, we arrive at the inevitable conclusion that, with the exception of the ashes, all plants are chiefly made up of four simple substances, viz:

Oxygen—Hydrogen—Nitrogen—Carbon (charcoal.)

This is an interesting fact, one which has been proved a thousand times; and it is a fact of importance in considering how to feed (manure) plants. The unscientific reader will find it hard to believe that (with the exception of the ashes), wood, leaves, straw, grain, flowers, in short, all vegetables, are made out of *only four kinds of materials*; and stranger still, that these four materials are really only charcoal, air, and water. Yet such is the unquestionable fact:

Illustration.—That so many kinds of plants, of such varied forms and colors, can be made from so few materials, is scarcely more incredible than that an architect is able to construct such a variety of buildings with only wood, iron, bricks and mortar. To secure the diverse forms, he uses different proportions of the same few materials, and puts them together differently. Just so, a few elements, *differently proportioned and put together*, make up the endless variety of plants and animal organisms.

Take a piece of granite rock, which has in it neither charcoal nor nitrogen, and pulverize it to a fine soil. Then sow some seeds in this soil, and they will produce plants, made up chiefly of *oxygen, hydrogen, nitrogen, and charcoal*. The oxygen and hydrogen may come from the water in the soil or in the air; the nitrogen and charcoal (*carbon*) must come from the air, for there is none of them in the granite soil. In such a soil the plants will grow to perfection, and mature their fruit or seed, though they may, perhaps, be of slow growth, and be dwarfed in size. Suppose we now try to hasten the growth, and to increase the bulk or yield of the plants, or of their seed, which is a chief end aimed at in cultivation. How shall it be done? Why, just as we would secure increased growth of flesh in an animal—feed it, give it more elements, more materials, out of which to manufacture flesh.

To feed a plant, we manure it—we furnish it with materials to assist or promote its growth. We place at its roots such substances (manures,) as will supply it with oxygen, hydrogen, nitrogen, and carbon; and, perhaps, also, a little of earthy material, required for its ashes. (Some of the scientific teachers of the present day claim that the atmosphere supplies everything but the ashes, and that the earthy elements are the chief things to provide for in manuring. Hence the stress laid upon phosphatic and other mineral manures. We believe this to be erroneous, in part at least, and one object of these articles is to counteract such teachings, and save to cultivators the large sums now expended for such fertilizers. Of this further on.)

If, (besides the ashes), only oxygen, hydrogen, nitrogen, and carbon (charcoal), are needed by the plants, the next question is, whether a manure, to be useful, must contain all of these four elements. Theory would indicate that the abundance of water (moisture) in the soil would always furnish plenty of oxygen and hydrogen; and experience seems to confirm this opinion; so we will only look after the supply of carbon and nitrogen.

The decay and burning of plants, and the breathing of animals, are always furnishing a supply of carbon to the air, in the form of invisible *carbonic acid*. As this substance is readily absorbed by water, theory would indicate that the water in the soil will generally supply the requisite amount of carbon to the roots of the growing plant. And this is partly confirmed by experience also. Yet it is probable that carbonaceous materials, such as straw, etc., when decaying in the soil around the roots of a plant, do really furnish additional supplies of carbon, and hasten growth. Hence one may reasonably conclude that all vegetable substances containing carbon (charcoal) are useful as manures, when they rot or decay in the soil so that their elements can be taken up and appropriated by the roots of plants. And here let it be noted, that, since all kinds of plants contain similar proportions of carbon, any one plant will furnish carbon for any other plant. So we manure any plant with any kind of vegetable matter most convenient, if it be matter that will decay and yield up its carbon to the growing plants.

We will next refer to the fourth and last organic element in plant food, viz.: *Nitrogen*, which is, we think, the most important one to be considered.

(To be Continued.)

Where the Hogs are Raised.

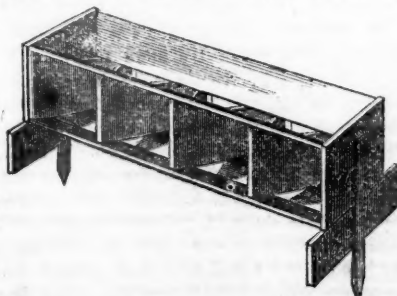
Some idea of the immense number of hogs raised and slaughtered at the West, and of the places where they are raised, may be gathered from the table below. The figures will be interesting also, as showing the number slaughtered and packed at the several points named. The table is made out for the year 1858. The reports for 1859 are not yet complete. It is estimated, however, that there will be a decrease of 50,000, as compared with the previous year, though there is a considerable increase at a few of the towns, including Cincinnati, Lafayette, St. Louis, Milwaukee, Madison, etc. The largest falling off is at Louisville, Nashville, Alton, Olney, and Chicago:

HOGS PACKED IN 1858.

Places.	Places.	Places.
Cincinnati.....382,826	Weston, Mo.....8,650	
Louisville.....288,590	Chattanooga, Tenn...8,400	
Chicago, Ill.....172,000	Rock Island, Ill.....8,100	
St. Louis, Mo.....57,500	Hunstonville, Ill.....8,000	
Madison, Ind.....54,000	Xenia, Ill.....6,500	
Keokuk, Iowa.....53,600	La Grange, Mo.....6,160	
Quincy, Ill.....49,000	Davenport, Iowa.....6,153	
Muscatine, Iowa.....47,000	Frankfort, Ky.....6,135	
Peoria, Ill.....45,000	Lebanon, Ky.....5,764	
Palmyra, Mo.....39,980	Mount Vernon, Ind...5,459	
Indianapolis, Ind...34,000	Attica, Ind.....4,900	
Burlington, Iowa...32,300	Clinton, Ind.....4,900	
Alton, Ill.....32,000	Eddyville, Iowa.....4,955	
Milwaukee, Wis.....32,000	Armstrong, Ind.....4,789	
Connersville, Ind...25,000	Washington, Ind.....4,760	
Gallatin and Nashville, Tenn.....25,000	Mount Pleasant, Ind. 4,660	
Alexandria, Mo.....18,610	Pittsfield, Ill.....4,510	
Shelbyville, Tenn...17,800	Barry, Ill.....4,210	
Chillicothe, O.....16,000	Grayville, Ill.....4,000	
Lexington, Ky.....15,000	Oregon, Ky.....4,000	
Circleville, O.....14,373	New Boston, Ill.....3,783	
Clarksville, Tenn...13,973	Newburg, Ind.....3,363	
Olney, Ill.....12,783	Marion, Ind.....3,325	
Delphi, Ind.....12,500	Carlisle, Ind.....2,900	
Eugene, Ill.....11,768	New Harmony, Ind...2,653	
Lafayette, Ind.....11,653	Covington, Ind.....2,552	
Shawneetown, Ill...11,460	Dublin, Ind.....2,525	
Princeton, Ind.....10,579	Rockford, Ind.....2,500	
Pekin, Ill.....10,400	Hagerstown, Ind.....2,500	
Owensboro, Ky.....9,513	Lodi, Ind.....1,400	
Lacon, Ill.....9,500		
Total.....		1,619,355

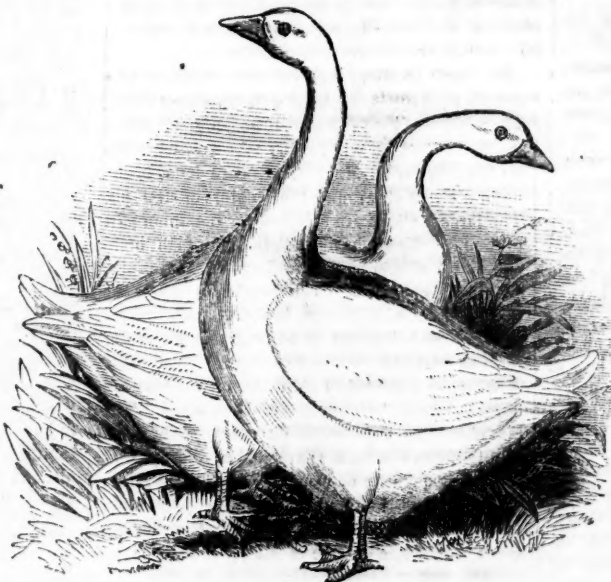
Teaching Swine good Behavior—A new Hog-Trough.

In the scale of manners, swine stand at zero, so that to call a person "swinish," leaves little more to be said in respect to his behavior. But the pig's disregard of etiquette is not altogether his own fault; he has never been taught better. From his "tenderest years" he has been allowed to "put his foot in the trough," and fight for his dinner. But he is capable of better things. A young friend once taught a pig to walk at a respectful distance from the pail while it was carried to the trough, where he would stand very watchful and very wishful, but not offering to approach, until the pail was emptied, and he was invited to help himself.—A subscriber to the *Agriculturist*, Mr. C. H. Lilienthal—who, although conducting a very large business in this city, still finds time to superintend a flourishing farm—wishing to have every thing done in order, has contrived an apparatus well adapted to secure good behavior in the pig pen at feeding time. The engraving given below we have made from a model, which he exhibited at our office. He disclaims any patent, and hopes everybody who likes it will appropriate the pattern without "fee or reward." It is made in two separate sections, *a*, and *b*. The lower part, *b*, resembles an ordinary plank trough, made by joining the edges of two planks at an angle, and nailing a piece of plank on each end. An upright strip, having its lower end sharpened, is fastened to each end of *b*. These are to be driven into the ground to hold the trough steady; they also serve to keep the upper section in its place, by means of an iron pin inserted through the top, as seen in the cut. In the upper section, *a*, the end pieces are about a foot high; boards, the length of the trough below, are framed into these, inclining towards each other, so as to leave an opening of say an inch between them at the bottom, thus forming a kind of open trough, or funnel, through which the food is poured. Short upright boards with deep notches cut to receive the upper trough, are



nailed diagonally across its lower part, their edges being joined, so that when the whole is set on the part *b*, alternate compartments are formed, each large enough to receive an animal's head only. It will rest more firmly, if the lower edges of the ends of the cross pieces are beveled slightly to fit a little way down into the sides of the lower trough. The opening in the upper trough being narrow, apples, potatoes, etc., which might choke the pigs, are kept from passing through until chopped fine with a spade or other implement. The contrivance is ingenious, cheap, and portable, and can be made with a saw and ham-

mer, by any one having very little skill in the use of tools. The extra labor and pains required to make such a trough, will be fully compensated by the ease with which each pig can be kept in place. There is also a gain in the weaker animals being permitted to enjoy their meal without the molestation by which they are often kept lean and hungry. The trouble of keeping back the hungry crowd is also in a measure avoided.



Bremen or Embden Geese.

[The following article with the illustration, was prepared for the *Agriculturist* in December, but crowded out of the January number. While making up this page we chance to notice in a recent number of a Western journal a somewhat similar article by the same writer, but without the accompanying illustration. This can only be accounted for by the conjecture, that the writer must have supposed the article would not appear in the *Agriculturist*, and therefore sent it to another journal.—ED.]

The common grey or mottled goose has hitherto, with but few exceptions, formed the general stock of this country. The degeneracy occasioned by breeding in-and-in, with neglect of proper attention when young, have in many instances so reduced their weight at maturity, that they fall short of a Brazilian or Muscovy drake; and a corresponding depreciation of the flesh in both texture and flavor, is the consequent result.

The ganders are usually white, or have a preponderance of that color, while the geese have various shades of ash-grey and dull leaden brown mixed with it; a preference is often expressed for those that have no white whatever, excepting only on the lower part of the body.

The common goose, however, having no distinguishing features, either in form or plumage, beyond the inferiority of the one and the irregularity of the other we may now pass on to the

Bremen or Embden Geese, which have usually been called Bremen geese in this country from the name of the place whence they were imported. English writers call them "Emden Geese." They were originally from Holland, and the appellation "Emden" was derived from the town of that name in Hanover. Beyond their great size, and the uniform clear and spotless white of their plumage, we are at a loss for any sign of a specific difference between these and our ordinary common goose. In figure they are alike, and the bill and legs are of the same yellow and reddish hue.

Utility is the one object to be regarded with all

varieties, even to the comparative exclusion of the color of their plumage, save only so far as is requisite in indication of the breed. Great size and weight, early maturity, and hardihood in their youth, are the points that mainly concern their owners, and render the settlement of accounts a satisfactory proceeding.

In these points the writer claims pre-eminence for the Bremen or Embden variety. One of their advantages is this, that all the feathers, being perfectly white, their value, where many are kept, is greater in the market than is ever the case with "mixed" feathers. In weight too, these birds have an advantage over all others, with the exception of the African or Hong Kong. All white poultry are considered to "dress," that is, pluck, of a clearer and better appearance than colored birds. The quality of the flesh, too, is very different from that of any other variety. It does not partake of that dry character which belongs to the other and more common kinds, but is tender and juicy as the flesh of a wild fowl. Owing to the quiet domestic character of the Bremen geese they lay on flesh rapidly; they never stray from their home, the nearest pond and field satisfying their wants, and much of their time is spent in a state of repose. An objection to the Bremen geese is

their inclination to commence laying at an earlier period than this northern latitude favors, which is in the latter part of February or first of March. They sit and hatch with more certainty than common geese; and frequently rear two broods in a season, the young ones proving as hardy as any with which I am acquainted. The Bremen goose has prominent blue eyes, is remarkably strong in the neck, and the feathers from near the shoulder to the head, are far more curled than is seen in other birds. C. N. BEMENT. Springside, Dec. 1859.

Why the Hens do Lay?

MR. EDITOR: In the January *Agriculturist*, you have pretty well answered Mr. Angell's question "Why (his) hens don't lay." I have a neighbor whose hens do lay, though he uses no patent "hen-persuader,"* and his fowls are the common old-fashioned biddies—of which he keeps, on an average, only eight or ten. The first year after buying his stock, he had one hundred and five and a half dozen eggs (1266), besides forty-two chickens. By taking good care of the latter he reared every one of them.

As he cultivated no land that year, he had to buy nearly all the food for his poultry. Next winter they laid eggs quite regularly, all through the cold season. He used simply these measures

* A subscriber not long since wanted a description of the "hen-persuader," so often referred to in the papers. We believe it was the invention of a facetious editor of the Springfield Republican, who proposed to construct a nest with a spring trap-door underneath. When the pullet lays an egg, it of course drops through, and the door closes again. Poor biddy, on looking round, sees no result of her effort, and down she sits and lays another egg, and so on. The editor aforesaid was in ecstasies at first, but he afterwards condemned his own invention, for he put a valuable pullet upon the "persuader" one morning, and forgot her for a week, when on going out he found nothing but a few feathers—the pullet had laid herself all away! So he tells the story.

to promote their laying: he fed them regularly, kept them comfortable by allowing them free access to a warm dry cellar, supplied them with pure water, gave them occasionally a lot of pounded oyster-shells, sprinkled fine gravel on the cellar floor, and varied their food as much as possible. He also made enticing nests for them, and made their roosts so that they could get up to them on convenient ladders without much flying.

To the above, I will add another thing. He saved the droppings of the roosts in barrels, for use in his garden. He put a quart of hen manure into a tub of water, and made a powerful fertilizer for all growing plants. That man keeps hens to a profit, and others may do so. (Nor) BURNHAM.

How Charcoal is Prepared for Market.

"Ding-dong, ding-dong, charcoal! charcoal! charco-o-o-o-o! here we go." This familiar cry we heard just now in the street from an immense carryall, and with the thermometer at zero this morning, the charcoal man is likely to have a brisk market.

The burning of wood for charcoal forms an important item of business among a large class of small farmers, in almost all parts of the country. It is carried on most extensively in well wooded regions too remote from market to make it an object to cart wood. The coaling of the wood greatly reduces its bulk and weight, so that it can be profitably carried ten or fifteen miles to market, when it would not pay to carry wood half the distance. Many farmers who own large tracts of woodland on mountains, or in districts remote from, but not at too great a distance from cities or villages, find this the most available method of realizing money from their forests. The wood is worth little as it stands, either for fuel or for timber. Condensed into charcoal, it is readily transported and pays a handsome profit. The business is followed in the intervals of farm labor, and turns to good account time that would otherwise be of little value, or perhaps wasted.

Sometimes men follow this as a business. They locate within a dozen miles of a city or village, where coal is worth from ten to fifteen cents a bushel. They either buy the woodland, and sell again when it is cleared, or buy the wood standing, without the land. An ax, a pair of horses, and a coal cart is about all the capital that is needed to start the business.

PREPARATION OF THE WOOD.—Any kind of wood will make charcoal, but there is a great difference in the quality of the article prepared from different woods, much more than is usually made in the price. The kinds selected are usually those least valuable for fuel, especially in the districts where the carting of hickory and oak can be made profitable. Chestnut, maple, and birch, are usually selected where these varieties abound; but any thing is taken that is not considered more valuable for wood or timber. A good deal of pine is used, but it makes the poorest charcoal. Basswood and chestnut also make poor coal. White birch and maple are much prized by blacksmiths.

The wood is first cut into billets of four feet, and if hired done, is let out by the job, and packed up in piles, or corded, so that the value of the labor may be conveniently estimated. If the work is done by the day or the month, the wood is left lying upon the ground as cut. The chopping of the wood is carried on at all seasons of the year. Swamps are cut over, and the wood drawn to the coal pit in the winter.

PUTTING UP THE COAL PIT.—Seasoned wood, or that which has been cut at least six months, is preferred, though green wood is often used.

The "coal pit" is no pit at all, but simply a covered pile of wood upon any dry level spot in the forest. A place is usually selected as free from stones as possible, and where the soil is deep, to furnish loam for the covering. The first work is the chimney, which is made of billets of wood, about two feet long, and put up in the form of a cob house, as seen in fig. 1. It should

Fig. 1.

be raised four feet or more, at first, so as to be out of the way of the first tier of wood. The chimney should be made of well seasoned wood, and it is a good plan to use old coal brands around the bottom which will readily take fire, when the pit is ready for burning. The cordwood is set up in a circle all around the center of the pit. The largest sticks are selected for the inner part of the pit. No sticks more than six or eight inches through should be put in. Logs of greater size should be quartered. The workman packs up the wood endwise, as seen in fig. 2, going round the heap, and keeping it as nearly in a circular form as possible.

Whether a second or third tier of wood is used depends upon the quantity to be burned. The aim should be, to keep the pit nearly in the form of a half globe, a little sharpened at the apex or top. Any quantity of wood may be burned, from five cords to a hundred in a single pit. From twenty to sixty cords will make a pit of convenient size. The outside of the pit is finished off

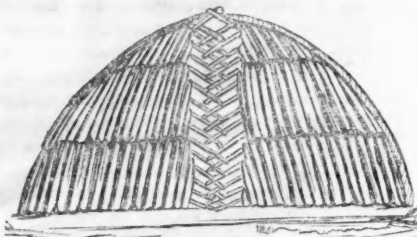


Fig. 2.

with the small wood or trimming, making the surface as smooth as possible, to shed off rain.

THE COVERING.—The object of this is to keep up a slow combustion, driving off the water and gases from the wood, without reducing it to ashes. The more perfectly the air can be excluded during the burning process, the less loss there will be. The pit is first covered with forest leaves, or with any cheap hay or litter, to pre-

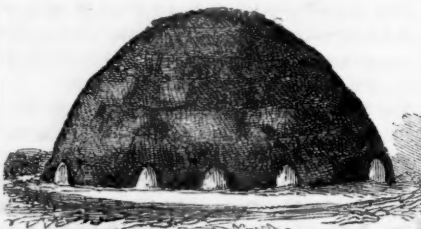


Fig. 3.

vent the earth from sifting down into the wood. A plow is then run around the pit, breaking up the sods two or three yards wide. The sods are put grass side down upon the leaves, or litter, and the loose earth is thrown on top of these with the shovel, making a covering six to ten inches in thickness. The chimney is left uncovered, and holes are left for ventilation around the bottom in six or eight places, half a foot in diameter. See fig. 3. The holes are shown too large here.

THE BURNING.—The Summer months are con-

sidered the best for this process, as the fires are more easily managed, and there is less waste of wood. It is done, however, at any season of the year, except in the coldest weather—as the burner has to be up frequently in the night, and to give the closest attention to his business, which would be very uncomfortable at this season.

The pit is fired by putting blazing brands into the top of the chimney, and letting them fall to the bottom. All the apertures are left open, until the wood is well caught, when the chimney is stopped. The burner will now show his skill in keeping up a steady, slow, combustion, until the whole heap is carbonized uniformly in all its parts. He has some power in hastening or retarding the burning, by means of his ventilators. If the fire burns too much toward the wind, the apertures must be closed upon that side. The process of carbonization is first completed in the middle and on the top of the mound. It should then be conducted evenly down on all sides. The vapor from the wood first passes off in a thick, yellowish smoke. After this, the smoke becomes of a lighter hue, and then black and dense, giving out the smell of pyroligneous acid, which grows stronger to the end of the process. As the process is completed, a light blue smoke is given off which finally ceases. The length of time taken to burn a pit, depends somewhat upon the condition of the wood, green or dry, the size of the pit, and the skill of the burner. As a rule, the slower the process, the more charcoal in proportion to the wood. A pit of three hundred bushels of coal should have at least six days for burning. Sometimes large holes in the covering will drop in, as the wood consumes beneath. These may be stopped by throwing in a few billets of wood, and immediately covering with fresh earth. The burner walks about the mound, using the hoe and the shovel in stopping cracks as they appear.

DRAWING OUT.—The pit stands a day or two after burning, to cool off. The coal is then drawn out with a rake, the earth that formed the covering falling down to the bottom. The sparks of fire that are left in the coal are put out with water. The utmost vigilance is required in this operation, as a little neglect would expose all the coal drawn out to a total loss. On this account it is always desirable to have the pit near a well or brook. The drawing out is usually attended to in the evening, when the fire is more easily seen, though it can be done during daylight.

The yield of coal from a given amount of wood depends somewhat upon the dryness of the wood, and the time of combustion. The more water there is in the wood, the more fuel must be burned to expel it. Hence there is very great economy in using well seasoned fuel for this purpose. A common yield is a hundred bushels of coal for three cords of wood; chestnut, oak, maple or birch. A skillful burner under favorable circumstances, will sometimes get forty or fifty bushels to the cord. A common charge for burning, after the wood is delivered at the pit, is two dollars and a half a hundred bushels. As the producer of charcoal seldom gets more than ten to twelve cents a bushel, and often less, after carting to market and peddling it out, it will be seen that it is only where wood is very cheap that he can make it profitable.

"Captain, what's the fare to Saint Louis?" "What part of the boat do you wish to go on—cabin or deck?" "Git out with your cabin," said the traveler; "I live in a cabin at home; give me the best you've got here."

Good intentions will not justify evil actions

Blinks from a Lantern.....XVI.

BY DIOGENES REDIVIVUS.

HOW THE FARM IS DEPOPULATED.



Nothing is more common in the rural districts than to find townships and parishes, where there has been no increase of population or wealth for the last fifty years. In some places there has been a decrease, the sanctuary is closed, the school-house is not opened except in Winter, and everything wears the air of desolation. The farm-houses only show glimpses of the coat of paint that was put on in the last generation, and the barns reveal their scanty stores and diminished stock, through many a gaping hole and unhinged door. The bucket is not only moss-grown, but leaky, the curb is shattered, and the well-sweep is decaying. The garden fence is mended with brush, briars every year usurp a wider domain under the wall, and the weeds increase in variety and luxuriance as useful plants die out. The boys and girls, long before they reach their majority, desert the homestead in quest of fortune in the city or village, upon the prairie, or on the sea. This very common fact is little understood in the region where it most frequently occurs, and the parents are not able to conceal their astonishment that they can not keep a single child at home to take care of them in their old age. My lantern must throw a little light upon this dark spot in farm life.

Joe Sedgewick lives in one of these blighted neighborhoods, and is now with his wife, hard on upon seventy years of age. They have managed to raise up a family of seven children, four sons and three daughters, not one of whom is left with them, or settled in their neighborhood. A grandson born and bred in the city, with the prospect of full possession of the farm at no distant day, has been induced to take up his abode with the old folks, and smooth their pathway to the grave.

The senior Sedgewick has always been an industrious man, having been educated in that school of morals which teaches that the chief end of man is to work. His farm was not paid for, and he felt that it was incumbent upon him to take no rest or recreation, until that honorable object was accomplished. He worked early and late at his business, hiring but little labor, and that only in the Summer. He was up at four in the morning, the year round, taking care of cattle, fattening swine, carting wood, plowing, planting, mowing, and gathering in the harvests.

As soon as young Joe was big enough to mount a horse, he was put upon old Dobbin, to plow out the corn for hoeing. This was very entertaining for a bright little boy of six years, for a while, and he almost felt like a man, as the light pull of the rein guided the horse to the right or left, according to his will. But as the long, hot days of June came on, Joe began to get tired before noon, and sometimes the little fellow got asleep in his saddle. For this he was scolded, and sometimes pelted with a sod. His legs ached at the unequal motion of the horse, and the jerking of the plow, and it seemed to him that the corn rows grew longer every day that he rode. He was put into the field to plant and hoe as soon as he had strength for the work. His childhood ended when he was about ten years of age, and he never had any youth. The senior Sedgewick did not believe in play for his boys; could not conceive that a rational being had any strength to waste in such nonsense, when work would bring money. This could not, however, be wholly prevented. While the boy was at school, he indulged in the

sports of the play ground, ball, goal, hide-and-seek, sliding and skating. This was such a contrast to the all-work life of the farm, that Joe grew fond of his books. The school-house was a sort of palace to him, associated with bright faces, sunny smiles, and the gladsome shouts of children. It was a sad day to him, when the Winter school closed, and he began the Spring work. For eight long months, there was to be no relaxation, no visiting, no fishing, even on rainy days, for his father always had work for stormy weather, sometimes under cover, but quite as often in the soaking rain. The lad did not murmur much at this, for his father worked, and the hired men worked, and it seemed very manly for a boy to do likewise.

But his boyish nature craved occasional play-days, something pleasant to look forward to, when the hoe and the plow might be forgotten. He had learned to read, and got occasional glimpses of the few books in the household. But his father did not fancy the bookish tendencies of his boy, and always contrived to keep him as busy as possible in the evening, so that he could not read. Sometimes it was shelling corn, sometimes it was churning or assorting potatoes. But Joe, learning that this was the settled policy of his father, contrived to get tired very early evenings, and put off for bed, where the tow-wick candle lit up the forbidden pages, and the boy refreshed his mind, more than his body with sleep.

By the time he was fifteen, these stolen waters were so sweet, that he could no longer endure the cheerless, all-work life of the farm. He was so much set upon books and an education, that his father consented to his leaving home for school. By dint of teaching, and hard struggling he worked his way through college, became a lawyer, and rose to eminence in his profession in the city.

The second son had few of the intellectual tastes of the first, took naturally to work, and was the special delight of the father. But he was kept with a tight rein, and knew as little of play as his brother. He was disposed to remain longer upon the farm, and to make improvements that his father did not appreciate. He had a taste for fine cattle and horses, and always wanted the best calves saved for cows and working oxen. But the butcher also wanted the best calves, and the butcher's purse usually outweighed the boy's arguments. He wanted the steers kept clean, and their horns ornamented with brass knobs, to make them look better, as well as to keep them from goring other animals. He wanted the fences kept in good repair, the brush cleaned up under the walls, the Summer fuel cut and piled in Winter, and all things kept snug around the farm and its buildings. But the father despised these praiseworthy tastes in the boy, laughed at him for his painstaking, and sometimes scolded him for his waste of time upon these unimportant matters. At the age of seventeen, the boy's trunk was packed for the village, where he had found a place in a store, and could keep things in order.

The younger sons following the sisters, had still more cultivated tastes as they grew up. While the father's views of farming remained unchanged, his discipline had relaxed somewhat, and in the garden the children were permitted to carry out their own plans, when it could be done without expense. New fruit trees and vegetables were introduced without his aid or sympathy. He never could be induced to plant an orchard, though he was as fond of fruit as any member of his household. He never gave any attention to the garden, and the flower borders and strawberry beds, the grape arbors, and the

rose trellises of the young folks, were his favorite objects of ridicule. He despised every thing like taste in the garden or upon the farm, and in due time, succeeded in emptying his home of his children. This work of depopulation is not confined to the farm of Joseph Sedgewick.

For the American Agriculturist.

How Farmers live down East.

It is an astonishment to our Southern and Western friends, to see so many evidences of thrift and prosperity in New-England where the land is so broken, poor, and stony. Neat, white dwellings, substantial barns, handsome churches, and attractive school-houses, are every-where visible, as if they were a natural growth of the soil. Wealth is somehow squeezed out of land that would not be thought worth plowing in more favored regions.

Upon a petition for the laying out of a new road in the towns of Candia and Deerfield, N. H., before the county court, it appeared that those two small towns with a population of about 3,500 consumed two thousand barrels of flour, seven thousand bushels of Indian corn, and seventy barrels of salt pork, beside their own home grown products. These are agricultural towns, made up mainly of small farmers who till the soil part of the time, and in the Winter and rainy weather, work at shoe-making or some other mechanical business. To pay for these imports of provision, it appeared that they manufactured two hundred and eighty eight thousand dollars worth of shoes—forty per cent of this sum being paid for labor. The most of this amount goes into farmers' families for binding and making. The business is managed by traders or storekeepers, who have the leather cut out in their own establishments. It is then sent out for binding, into all parts of the town, at a fixed price for a given kind of work. It is then returned to the establishment whence it is sent out again, to be made up. This makes every home in the community a busy hive of industry, all earning money without the contaminating influences of large manufacturing.

This sort of mixed farming prevails to a great extent in New-Hampshire, and in Massachusetts. The annual shoe crop of the latter State is over forty millions of dollars, and this is but a single item among the manufactures that are carried on mainly among farmers. Those who see our bleak hills and rocky fields, are sometimes inclined to pity us. We like to relieve them of any unhappiness on our account, by pointing to these facts in our internal economy. We raise our own vegetables and fruits, our own milk, butter, and cheese, and most of our meats and breadstuffs. We buy flour with the products of our in-door labor, and have a handsome balance on the right side of the sheet, at the close of the year.

DOWN EAST.

Mrs. Partington says she can't understand these ere market reports. She can understand how cheese can be *lively*, and pork can be *active*, and feathers *drooping*—that is, if it's raining; but how whiskey can be *steady*, or hops *quiet*, or spirits *dull*, she can't see; neither how lard can be *firm* in warm weather, nor iron *unsettled*, nor potatoes *depressed*, nor flour *rising*—unless there had been yeast put in it, and sometimes it would not rise then.

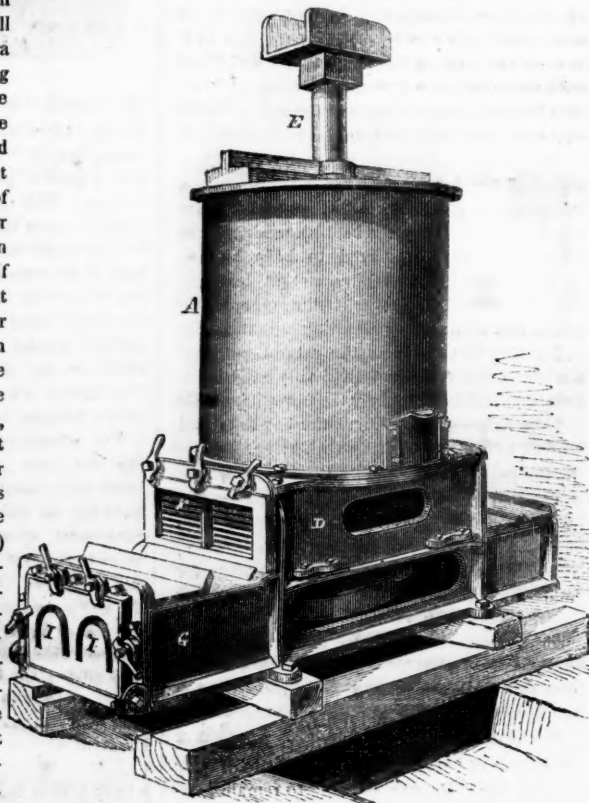
LUCK AND LABOR.—A guinea found in the street will not do a poor man so much good as half a guinea gained by industry and economy.

Winegar's Drain-Tile Machine.

The smallest improvement even, in the construction of machinery for manufacturing drain-tiles, is a matter of great importance to the farming interest of the country. We are well convinced that within a brief space of time there is to be a great waking up to the value of underground passages for both water and air. To say nothing of the advantages of freeing the sub-soil as well as the surface from standing water, we believe that in very many cases, even on naturally dry soils, it will abundantly pay to construct a system of pipes for carrying air two or four feet below the surface. The advocates of the shallow planting of trees, and of shallow plowing, lay great stress upon the necessity of keeping the roots of plants near the surface, so as to be within reach of the atmosphere. If this be so important, what must be the effect of carrying the air under the soil in pipes, from which it will naturally rise through the soil, so as to give the roots an air-saturated soil, so to speak, three or four feet deep, instead of three or four inches? But we will not discuss this point further here. On page 325 of last volume (Nov. No.) we gave a description of Matice's machine for making drain-tiles, and recommended it, after seeing it in operation. We now present an illustration of another machine, which, from an examination of the model, we judge to be valuable. We have not had opportunity to see it in actual operation, and can not, therefore, speak so strongly of its working capacity. It is complete in itself—having the mill for grinding the clay, and the apparatus for molding the tiles and all other needful fixtures combined in the one machine.

DESCRIPTION.—*A* is an iron drum, provided within with the grinding apparatus. The clay is put in at the top, and is worked downward. It is driven by horse-power, attached to the upper end of the shaft, *E*. (It may also be driven by steam power.) At each revolution of the shaft a portion of the worked clay at the bottom is forced into *D*, and out through the screen *F*, and falls into the box *G*. The cover then closes down, and a follower or piston forces the clay out through the dies *I, I*, in ready formed tiles. They are received upon an endless sheet, not shown in the engraving, where they are cut off into appropriate lengths in the usual manner, as described in our former article, and are thence carried to drying sheds. A similar arrangement of screen and dies is constructed on the opposite side of the drum, so that in reality the machine is a double one in all respects, with the exception of the grinding drum, which feeds both sets of dies. A single revolution of the shaft, *E*, produces two sets of tiles, or six pairs, three on either side. The proprietors claim that they can, and do, make 1200 two-inch tiles per hour with one of these machines. The machine is automatic—every part of it being moved by the turning of the shaft, the only attention required, being to shovel in the clay at the top, and carry away the tiles.

The special advantages claimed for this machine are: 1st, that it is built entirely of iron; 2d, that it is double acting; 3d, that the screen, *F*, which is the part most liable to clog and get out of repair, is here visible, so that every obstruction may be seen at a glance; and also that both the screen and die plate are easily taken off by simply turning the clamps, instead of having to take out screws. As above remarked, we can not speak from personal observation, and only name those points of excellence which are claimed for



it by the proprietors, and which appear to be well founded. There is but one size manufactured as yet, and the price for the machine complete—including a full supply of dies of different forms and sizes, receiving apron, etc.—is about \$300, we believe. The machine is the invention of Caleb Winegar and Samuel M. Smith of Cayuga Co., N. Y. The patent is now owned, we believe, by Messrs. Winegar & J. A. Tourrette. Any information desired in regard to its manufacture or sale, will probably be found in the appropriate place in the advertising columns.

Another Advocate for Toads.

For these many years we have been constantly pleading for the poor, despised toads. In proportion to their size, toads and wrens are by far the most useful animals on the farm and in the garden. The account with them stands all on the credit side, which can not be said of any domestic animal, large or small—unless you except bees, and they must have some care. But the subject is not exhausted. A great many people have yet to get over their aversion to toads, and to learn to appreciate their usefulness. We therefore cheerfully give place to the following from a distant associate who has not before spoken on the subject we believe. Speaking of the toad he writes:

We set up no plea for him on the score of beauty. His color, proportions and movements are

all on the other side. As to symmetry of form, he stands alongside the elephant, though lacking the universal caudal appendage of quadrupeds, to keep up a good balance. He is a very grave, sedate, and silent fellow, seldom seen roving abroad in the garish daylight, but choosing rather the more poetical hours of dusky eve. He is not swift of foot, yet has been known to travel far in twenty-four hours. Hence, perhaps, the old adage: "There's no telling by the looks of a toad, how far he can hop." Speaking of the elephant reminds us to say that the toad has an organ which few persons ever see. It is something like a proboscis, three or four inches long, which he throws from his mouth very suddenly, whenever an insect or worm comes in his way, and snaps up the luckless vermin into his maw. This proboscis lies coiled up in his mouth until such times as it is wanted for use. Naturalists say that it is longer and stronger, in proportion to his size, than the elephant's.

It should be better known than it is, that the toad is a very useful little animal. He hurts nobody, and in the pursuit of his livelihood, is always doing somebody good. He feeds on flies, beetles, and worms of all sorts, and he has a voracious appetite. As many as fifteen beetles have been found in the stomach of a single toad. He dines chiefly at evening, when insects are mostly abroad. It is surprising how many he will catch in a half hour, and how quickly he will dart upon his prey. Probably his dun-brown coat conceals him from the notice of his victims.

As the ant is yearly becoming more troublesome in gardens, it would be an excellent plan to collect toads and put them within our garden fences, to feast upon this intruder. All that they want is some shady place with mellow ground, where they can burrow easily during the heat of the day. By no means should children be allowed to worry and kill them, as they sometimes barbarously do. Nor should fastidious and nervous ladies order them to be driven from the garden lest their serenity of mind should be disturbed. You might as well drive out the gardener himself; the toad is your best friend.

We once heard of a gentleman who advertised for toads to put in his garden, offering a certain sum apiece. He was certainly a sensible and humane man, and a good gardener.

For the American Agriculturist.

"Following Nature."

"It's agin natur," is often triumphantly urged as an end of controversy by the unlearned, and not a few wiser heads have appealed to the way in which "Nature" operates, to confirm or disprove a theory. In a discussion at the Farmers meeting of the Conn. State Agricultural Society, the subject being, "The proper way of applying manures," one advocate of top-dressing, argued in its favor that this is Nature's method, and hence right. Such an application of fertilizers may be best, we are not now commenting upon that point, but the argument used has little force. Nature is not a *cultivator*. She furnishes materials, it is man's province to use them to the best advantage to secure the results he wishes. Nature never plows, nor drains, nor grafts, nor inoculates, nor performs one of a hundred processes whereby man has redeemed land, improved plants and fruits, and made plenty smile where Nature had denied her favors. It is true that lands are fertilized by natural processes, and an arid island may finally bloom with beauty unassisted by man, but he who waits for such results would need the life of Methuselah, thrice lengthened. Man wants quick returns; he must have a larger yield for his labor than unaided nature

processes would give him. Should he leave his grain, his fruits, or flowers to take their own course, he would soon return to savage life, gathering nuts and digging roots for subsistence, and clothing himself with untanned skins. To secure his ends he must often do violence to nature. He must drive the plow-share through her bosom, amputate her luxuriant over-growth, feed her stunted grains into obesity, and torture her flowers into monstrosities before they can supply his wants or satisfy his tastes. Nature's liberality is profuse but undirected; the power confided to her by the Creator is immeasurable but as untamed as the free lightning. She is to work for man, and it is for his science to discover her capabilities and turn them to his own account, and not to blindly follow her lead. She is an indispensable though at times an unwilling servant, often a reliable adviser, but not the infallible teacher that many suppose.

ART.

For the American Agriculturist.

County Fairs and Humbugs.

"Well John, how did the Fair go off?" asked a friend, of a young man who had just returned from the — Co. Agricultural Exhibition. "Humbug, like all the rest of them," was the reply. John had attended several exhibitions of the kind during the Fall, and as he is one of a class whom we have often heard pronounce the same unfavorable opinion, it is worth while to learn how he formed it. Let us follow John as he spends the day and his money. Before entering the grounds of the exhibition he is attracted by the sound of music from a tent, and reads from the bill posted at the entrance, a flaming description of a fat woman, a remarkable giant, and a wonderful dwarf; admission 10 cents. He concludes to invest, but speedily comes out, exclaiming, "sold." Next he inspects the six-legged calf, the chicken with two heads, and sundry other monstrosities, with but little more satisfaction. He then enters the enclosure of the exhibition, as he would a menagerie, to see the show—to find something extraordinary to wonder at. Passing thus up and down through the tents, and among the stalls of the cattle, only to "see sights," he finds comparatively little of interest. Here and there he pauses to look vacantly at a monstrous pumpkin, or an unusually fat ox, but is not at all attracted by new varieties of fruit, economical labor-saving machines, or improved breeds of stock. The horses hold his attention a little more fixedly, but unless there is a track and a race, he soon thinks all stupid, and wanders away to where a crowd is gathered around a soap pedler, an auctioneer of "notions," or a sharper with a lottery table. Having amused himself awhile with these at a cost he can ill afford, he leaves, a humbugged man—humbugged by himself—and votes the whole fair a failure and a swindle.

And yet the managers of exhibitions are not altogether free from blame in the matter. They too often connive at, if they do not encourage, the presence of these side attractions, and even in some instances allow them a place within their own enclosure, to "draw" and amuse the unthinking crowd. The purpose of exhibitions is not amusement but improvement; if committees will keep this steadily in mind, they may be sure of the ultimate success of County Exhibitions.

SPECTATOR.

"Well, Robert, how much did your pig weigh?"
"It didn't weigh as much as I expected, and I always thought it wouldn't."

Filtering Cisterns Again.

ANOTHER MODIFICATION PROPOSED AND DISCUSSED.

Pure and palatable water is one of the most important requisites in every household. Water distilled in the form of vapor, and descending as rain, is the purest and best adapted to common use. Living, as we do, where there is little dust, and having a close neat cistern supplied from a high well painted metallic roof, we use for drinking and all household purposes the unfiltered rain water just as it is collected. Instead of being insipid or disagreeable, it is pleasant to the taste,—much more so to those accustomed to it, than the best spring or well water. But where much dust flies, or where the roofs are of wood, moss covered, and subject to be soiled with falling leaves and other matters, it is desirable to

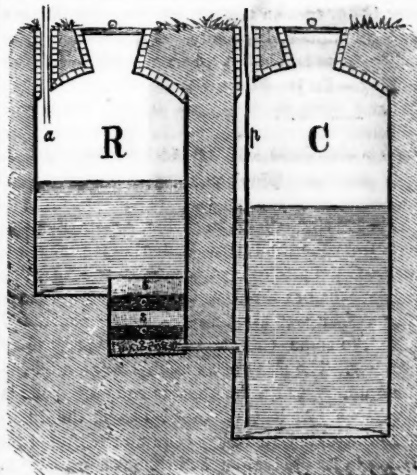


Fig. 1.

have the water filtered. So also, there is very little spring, well, or river water, which would not be improved by filtering, at least for household use.

We have already described several plans for simple box or barrel filters, and also two forms of filtering cisterns. One of these is that shown in fig. 1, in which the water is received from the roof through the pipe *a*, into the cistern *R*. It filters through several layers of sand and charcoal, (*s, s, c, c*), and passes by a pipe into *C*, and is pumped up through *p*. Another form proposed as an improvement, is that shown in fig. 2, in which the water passes from *R*, up through the filter, into *C*. The advantage claimed for this is, that the sediment which in fig. 1 collects upon the top of the filter, would in fig. 2 settle down, leaving the bottom of the filter always clean and effective.

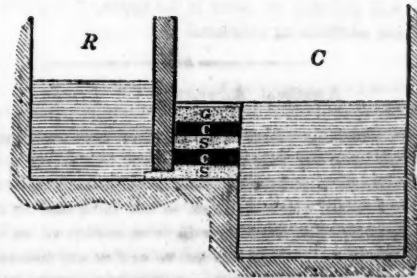


Fig. 2.

—it being understood that beneath the lower layer of sand there is a perforated board covered with a piece of flannel to support the sand. (This is not shown in the engraving.)

We now have still another modification proposed by Mr. C. Briggs, of Kings county, N. Y., which, after a trial of it, he considers an improvement upon either of the foregoing. The lower section of the cisterns is shown in fig. 3.

The water is received from the roof into *R*, as in fig. 1. At the bottom of this, in the center, is placed a box *F*. This box is filled with several alternate layers of sand and charcoal, (*s, s, c, c*),

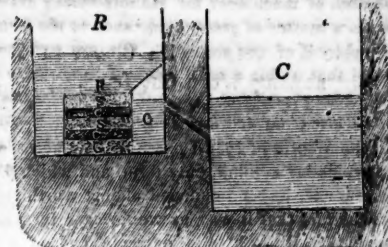


Fig. 3.

the bottom layer being coarse sand, or fine gravel. Between each layer is placed a sheet of cotton-flannel. The top of the filter is covered with a plate of galvanized iron to keep the sand in place. This iron-plate is punctured with small holes to admit the water. A water-tight partition is made from one side of the filtering box to the wall of the cistern, leaving the open chamber *O*. The lower side of the box next to *O* is left open, the gravel being kept in place by a piece of the cotton flannel which lines the box on all sides, passing round under the bed of gravel. The filtered water passes through the open pipe shown leading from *O* into *C*.

The advantage claimed for this arrangement (fig. 3) is, that any sediment remaining in the filtered water settles to the bottom of *O*. This plan does not, on examination, appear to be an improvement upon fig. 2; for in the first place there should not be any sediment in *O* if the water has been well filtered in passing through the box *F*; and second, this arrangement has the same objection as fig. 1, viz: the sediment from the unfiltered water would collect upon the top of *F*, and after a time choke it, and require drawing off. Of the three kinds here described, we should therefore prefer that of fig. 2.

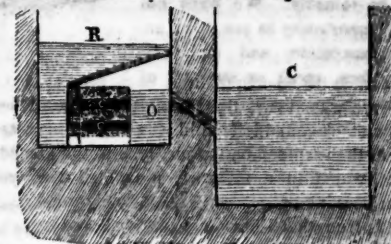


Fig.

We will, however, propose in fig. 4 still another arrangement combining the advantages of fig. 2 and fig. 3. Construct the filter similarly to fig. 3, but put a layer of gravel or coarse sand at the top, and finer sand for the bottom layer. Let the bottom be made of punctured galvanized iron, or with a perforated board, placed a few inches from the lower side. Let the right side, next to *O*, be closed, and cut away part of the lower left side so as to admit the water freely. Let the tight partition extend from the cistern over to the left side of the filtering box. The water will then pass in at the left, and up through the filtering materials, and thence over into *O*, and through the open pipe into *C*. The sediment in the unfiltered water in *R*, will fall back from the bottom of the filter, leaving it always clean and effective. If any sediment chance to wash through the filter, it will then settle into the bottom of *O*, as described in fig. 3. The advantages of fig. 4 over fig. 2 are, however, hardly enough to pay for the extra labor and expense of the construction.

Other plans will doubtless suggest themselves to different persons, but whatever form may be

adopted, we advise every person to construct some kind of apparatus, or at least to use pure rain water, and discard spring, well, brook, river, or pond water, unless filtered.

Valuable Experience with Clover in Renewing Worn Out Land.

To the Editor of the American Agriculturist

In the Winter of 1848 I purchased six acres of land which lay adjoining my farm, and which the former owner had pronounced almost worthless, from the fact that it was, as we farmers term it, "run out." It lay at the extreme end of his farm, and a piece of woodland lying between that and the rest of the farm, with a steep hill to ascend, made it impossible to get manure to it, at least so he thought. He had cropped it with rye for several years, until it would not produce enough to pay for the labor bestowed, his last crop being but five bushels per acre. This so discouraged him, that he offered to take ten dollars per acre for the piece. I bought it, thinking that I could bring it to its former fertility, which was sufficient to raise 40 bushels of corn per acre. In the Spring I sowed six quarts of the large kind of clover seed to the acre, and let it lie that Summer, turning nothing on it. The clover took as well as could be expected on such land. The next Summer it came on a little better, and would have been perhaps a third of a crop had it been mowed; but as soon as it was well in the blossom, I plowed it under, and about the first of September sowed it to rye, seeding to clover again in the Spring. The result was nine bushels of rye per acre, which was so much better than I expected, that I resolved to continue the process. In 1853 the clover was considerably better than before, and in July I turned it under again, sowed and seeded as before:—produce 12½ bushels to the acre. Performed the same operation in '55 and '57, with the following results: in '55, 15 bushels, and in '57, 22 bushels to the acre, when I considered the land strong enough to bear corn.

Accordingly I let the clover grow, and in October turned it under to plant to corn next season. The rye was always threshed in the field, and the straw stacked and left until the next crop was sown, then spread on top just before the ground froze, which, in a measure, prevented the rye from heaving out.

It is true that I have not derived any benefit from it except what rye it produced over and above the cost of cultivation, but the increase in the value of the land will more than pay all expense, for the former owner has offered me \$30 per acre for the piece. I have never pastured it one week since I have owned it, so it is an easy matter to come at the profit or loss in the speculation.

"FARMER BOY."

Oak Hill, N. Y.

REMARKS.—The experiment of "Farmer Boy," and its results, like that of "Squire" Bunker given in the January *Agriculturist*, should be carefully studied by the owners of "worn out" lands. To make it as clear as possible we have re-arranged the figures sent by our correspondent, placing them in tabular form.

Dr.	
Cost of cultivating and harvesting 6 acres rye	4 years, @ \$6 per acre, per year.....\$24
Clover seed and sowing.....	44
Interest and taxes on land 10 years.....	50
Total cost.....	\$238

Cr.	
350 bushels Rye at average of 70c.....	\$245
Increase in value of land.....	120—\$365
Clear Profit.....	\$127

This would be \$12.70 per year, or about \$2 per acre, which is a profit of 20 per cent on the investment, over the regular rate of interest.

Perhaps some skeptical anti-book farmer may say "All very well, and easily done, when you can buy land at such a bargain, but you could get no such figures from land at \$30 per acre. Let us see what may be done. "Farmer Boy" obtained for the first crop, 9 bushels per acre; 2d, 12½ bushels; 3d, 15 bushels; 4th, 22 bushels—an average increase of over 4 bushels per year. Should the same course be followed, it would be safe to calculate upon an increase of 4 bushels per acre for the next crop, making the yield 26 bushels per acre. The account would then stand

Dr.	
Cost of cultivation (1 acre).....	\$6
Clover seed and sowing.....	5
Interest and taxes two years.....	5
Total cost.....	\$16

Cr.	
26 bushels Rye worth at least 75c. per bush.....	\$19 50
Profit.....	\$3 50

near 12 per cent on the investment after paying for legal interest, labor, etc. A result that can, and ought to be obtained, by a rational system of farming.—Ed.]

How Tobacco is Grown and Prepared for Market... I.

Tobacco stands next to cotton, among the exports from the Southern States. It very early attracted the attention of planters, and in colonial days, before the development of cotton manufactures, it was a main reliance for export, and indeed, to some extent, served the purpose of currency. The price of a month's work, a bushel of corn, a cow, or a horse, was so many pounds of tobacco. As it is reckoned among the luxuries of mankind, there has been no such rapid increase in its production as in the case of cotton. There has, however, been a steady gain in its use, and notwithstanding its well known injurious effects, and the war made upon it by the medical faculty, it is chewed, smoked, and snuffed in ever increasing quantities. The exports which in 1855 were put down at fourteen millions of dollars, have reached this year twenty one millions, and this is but a part of the product of the country. The principal tobacco growing States are Maryland and Virginia, and the States lying immediately west. But it is grown in considerable quantities in all the other States, and forms an important crop in the valley of Connecticut river. It has been cultivated to a considerable extent in that region from the earliest days, and the variety known as Connecticut seed leaf, used chiefly for wrappers, commands a high price in the market. Indeed, we suspect that a large part of the Havana cigars consumed in our city, are grown on the soil of the nutmeg State.

SEED AND SEED BEDS.

The practice of transplanting is universal in the cultivation of this crop. Much therefore depends upon an abundant supply of good, strong, healthy plants. To make sure of success, every planter should grow his own seed, saving the strongest early plants for this purpose. The seed, if not "the least among herbs," is exceedingly minute. It is said that twenty-five hundred, furnishing plants enough for a half acre, will lie upon a half-dime. It is of the utmost importance to have good seed, as the loss of a few days at the critical time of sowing, will make the plants too late for a well matured crop. The vitality of the seed may be tested by putting a few from the lot into a lock of moist cotton, to see if they will germinate. It is said that seed kept five or six years, will sprout sooner than fresh seed; but this we regard as one of the old wives' fables with which our agriculture is still encumbered. Well dried

seed of the last year's growth is quite certain to germinate. It is the practice of some of our best cultivators to sprout the seed designed for sowing, before putting them into the bed. This is done by taking two or three quarts of wood mold, or any other very fine soft soil, and mixing the seed very thoroughly with the whole mass. It should then be moderately moistened, and kept in a warm room four or five days previous to the time of sowing. This course enables the sower to distribute the seed more evenly over the bed, and as they are already sprouted, they come up before the weeds, and keep the start of them.

It requires but a small quantity of seed to supply a large plantation. The more sparsely and equally the seeds are distributed, the stronger the young plants will grow. The rule is about a thimble full, or a pipe bowl full, to a square rod, and this quantity of ground ought to furnish plants enough for an acre.

The seed bed should be prepared in a very thorough manner. It may be either with or without glass, according to the circumstances of the cultivator. Where the season is rather short for this crop, as in places north of this city, it is an advantage to start them under glass, in the same way as cabbage plants. If without glass, a spot should be selected upon the south slope of a hill, or in some sheltered spot where it will have the full benefit of the sun. The bed is prepared early in the Spring, by cutting up the brush, grubbing up the roots, and burning a large pile of brush upon the spot. This furnishes a large supply of wood ashes, which is one of the best fertilizers for this plant. If a fresh virgin soil is not at hand, the want may be supplied by working in a heavy dressing of compost, or yard manure, into any piece of land that is convenient. In this case it will be a good plan to burn brush on top, as it kills the seeds of weeds, makes the soil fine, and fertilizes it. If brush is not convenient, wood ashes will be a good substitute. The plot should be laid off into beds about four feet wide, for convenience in weeding and drawing the young plants as they are wanted. The surface should be raked with a fine toothed garden rake, until all the small lumps are broken. The beds should next be rolled or gently pressed smooth with a board or shovel, to prevent the seed from sinking too deep into the soil. After sowing the seed, the bed should be again smoothed over with the back of the rake, and gently patted down with the shovel or board. All this care is necessary, that the seeds may not be buried beyond the reach of the sun's rays. Unless the seeds have been previously sprouted, they come forward very slowly, and it will be six or eight weeks before they become large enough for transplanting. It is a good plan to wet the beds occasionally with a weak solution of guano, about a pound of guano to a barrel of water applied at evening after the liquid has stood all day in the sun.

After the young plants show themselves, the beds should be closely watched for weeds. Where the plants are too thick, they should be thinned out, and the soil should be stirred as often as once a week. The strength of the plants will depend a good deal upon the cultivation they receive while in the seed bed.

SUITABLE SOIL, AND TRANSPLANTING.

It is not all good land that is suitable for this crop. The famous tobacco of Cuba is grown only in a very limited district in the southwest part of the island, and this district is growing smaller from the wretched system of tillage. Formerly the tobacco lands were about eighteen miles from Havana, now they are one hundred and fifty. In Virginia, and the other States, tobacco of the

best quality is grown upon a light alluvial loam, rich in vegetable matter. Lands recently cleared and brought under the plow, are considered the best. The best crops are secured in mild, warm seasons, with not too much rain. It never can be an object to grow this crop upon wet soils, or in mountainous regions. In the valley of the Connecticut, rich loams, with an admixture of sand, are preferred. If the land is not dry, it must be made so, in order to secure a good crop.

In all cultivated soils, however well adapted they may be to the crop, there should be the most thorough preparation, both in the plowing, and in the manuring. Tobacco, on poor land, will not pay, and all who attempt it will soon discover it. The land should be plowed ten or twelve inches deep, and manured enough to produce a hundred bushels of corn to the acre. It should be thoroughly harrowed, and made into as fine tilth as possible.

The season of transplanting is from the middle of May, to the middle of June, according to the latitude. It should not be done until all danger from frost is over. The best time for the operation is immediately after a shower, or in rainy weather. If the rain does not favor, the plant bed should be thoroughly drenched with water, a few hours before transplanting, and water should be applied after the setting, at morning or evening, as long as the plants droop. The distance between the plants differs somewhat in different localities. As a rule they give more space to each plant in the southern than in the northern States. In Virginia four feet each way is a common distance, and a slight hill is made upon which the plant is set. In Connecticut the rows are about the same as for Indian corn; three to three and a half feet apart, and the plants two and a half to three feet in the row. It is only where the land is made very rich, that it will bear so close planting.

(To be continued.)

One of those "Small Plots."

WHAT A MECHANIC DID WITH 30 RODS OF GROUND—TOMATO CULTURE—SUCCESSION OF CROPS, ETC.

We have taken frequent occasion to show how much pleasure, how many real luxuries, and how much profit may be derived from a small plot of ground, not only by farmers, but by mechanics, and indeed by all classes. We are sure that as a general thing the highly cultivated garden pays better returns for the cost of labor, manure, etc., than any other part of the farm. In illustration of what may be done, and also for the practical hints contained, we condense the following from a letter from Franklin Co., Mass., dated Aug. 29, but put on file for reference. The letter was not designed for publication, but as we omit the name, we shall be excused by the writer for the use we make of it. "...I love cultivating the soil so well (though a mechanic) that I can not help loving a true friend and genial companion like the *Agriculturist*, which has done so much to make me wiser and to instruct and entertain myself and family. Yes! the good it has done me, for though I only boast of thirty rods of ground, all told, it would do you good to witness the beautiful flowers that cheer with their beauty and fragrance my 'humble home,' for the choicest of which I am indebted to you; and to see also my productive and well ordered kitchen garden (pardon the vanity); and to hear the profundity of my discourse when enthusiastically arguing with the more favored 'lords of the soil.' For all these we are indebted to the *Agriculturist*, as well as for the gratification its household directions, its

pictures, and its stories, afford to wife and children. You would be cheered by the interest manifested by all, the little ones included, as the time for receiving a new number approaches.... Though living in a farming country, I know but few *real admirers* of 'the most healthful, the most useful, and the most noble employment of man.' So I content myself with my little garden, and play farming, hoping for the time when it shall be my sole employment.... But I find that (with your help) even my play farming is a profitable game. Thus:

I have a small hot-bed 13 ft. by 3½, with which I commence the sport in the Spring, get off a crop of small salads by the time that the tomato plants are ready for their first transplanting, then fill the bed with these little plants. I sold fifteen dollars' worth last Summer, besides having plenty for myself. After they were off, I sowed cabbage seed; May 23, sold the plants for \$1.50, and planted cucumbers; had plenty to eat, some to give to friends, and some to sell. The net sales from this little bed were \$19, besides \$5 worth given to friends and used, estimating them at the same price as those sold. By practising substantially the plan recommended by your Michigan correspondent described in Vol. XVIII (page 142, May No.), I raise finer plants, and consequently get better prices for my plants than those who neither read nor think. I obviate the necessity for the first transplanting thus: When the tomato plants have formed the first rough leaf, I draw a knife along the rows about one inch below the surface, to cut off the tap roots; then I put about one inch of soil between the rows, to enable the plants to form the small fibrous roots.

I have sold from my garden \$12 worth of plants and vegetables, and have still plenty left to use and to sell; thus you see my dear friend, you and I together have sold \$31 worth from our 15 rods of ground devoted to that purpose; and we have yet to gather our Lima beans, (tardy beans here) several bushels of tomatoes worth \$2 a bushel here, 150 lbs. or so, of Hubbard Squash, 30 bunches of celery, 50 heads of cabbage, a sprinkling of Kohl Rabi, etc., etc.; and we have besides almost a load of manure made from the offal of the garden, and we have enjoyed Spring salads, feasted on green peas and new potatoes, (celery on the ground now), reveled in a profusion of strawberries and raspberries, improved our minds, strengthened our bodies, entertained our friends, and pleased and instructed our children. We have already started our cold frame for next Spring, and if there is one thing which we are grateful for more than another at this time, it is for your directions in this department...."

"Hungarian Millet" in Iowa.

To the Editor of the American Agriculturist:

I notice the article on Hungarian Grass or millet on page 355, Nov. No., and cheerfully give my experience with a first crop:

June 17, sowed three bushels of seed on six acres (rain June 19). Seed came up 22d. Cut and stacked Sept. 1 to 10, in the same manner as Timothy. Weighed one load, estimated at ½ tun, but Fairbanks' Scales indicated 1750 lbs., it being much heavier than the same bulk of Timothy. Estimating the whole crop by this load, the six acres yielded thirty three tuns, or 5½ tuns per acre. Nov. 10, threshed the hay with a machine, reserving five tuns to feed out with the seed on; yield 140 bushels of clean good seed, being 28 bushels per acre. Soil very light, some sandy but rich. I am confident a good crop may be secured every year by seeding between June 15, and July 15, there being plenty of time for it to mature af-

ter the latter date, on rich well pulverized soil—for example on ground in potatoes the previous year. By delaying to the above dates, all other seeding is done, which is a great consideration. But the all important one is, the land is then dry and warm, and the sun hot, which causes the seed to vegetate at once. Sow without delay as soon as the ground is prepared. As far as practicable prepare the ground one day, and sow, harrow, and roll the next, not waiting to prepare a large field, and thereby give the weeds a start of the grass. I have in part wintered horses and colts on it the last two Winters, and know no reason why it is not as good for stock as Timothy. J. A. GREEN.
Muscatine Co., Iowa, Dec. 1859.

P. S.—It may be of interest to state that in the Fall of 1858, the Hungarian Seed was abundant here at 50 cts. per bushel; but in the Spring of 1859, it was raised to \$2 50 per bushel; while in the Fall of 1859 it commanded only 62½ cents per bushel. J. A. G.

REMARKS.—The high price last Spring was doubtless owing to the humbug Honey-blade Grass fever, and the large purchases of the Hungarian Millet, by those engaged in that swindle, which we exposed last May. In the Winter we procured some seed for distribution which cost us \$2 a bushel here (it cost less than \$1 where procured at the West), but before mid-summer it was held at \$3@4 in this city, and was sold in some places at \$5 to \$6 per bushel.—Ed.]

HUNGARIAN MILLET IN RHODE ISLAND.—"Henri," writing to the *Agriculturist* from Shermantown, R. I., states that he sowed ten acres on the 1st of June, and cut about thirty tuns of fodder, which after trial he considers fully equal to herds-grass.

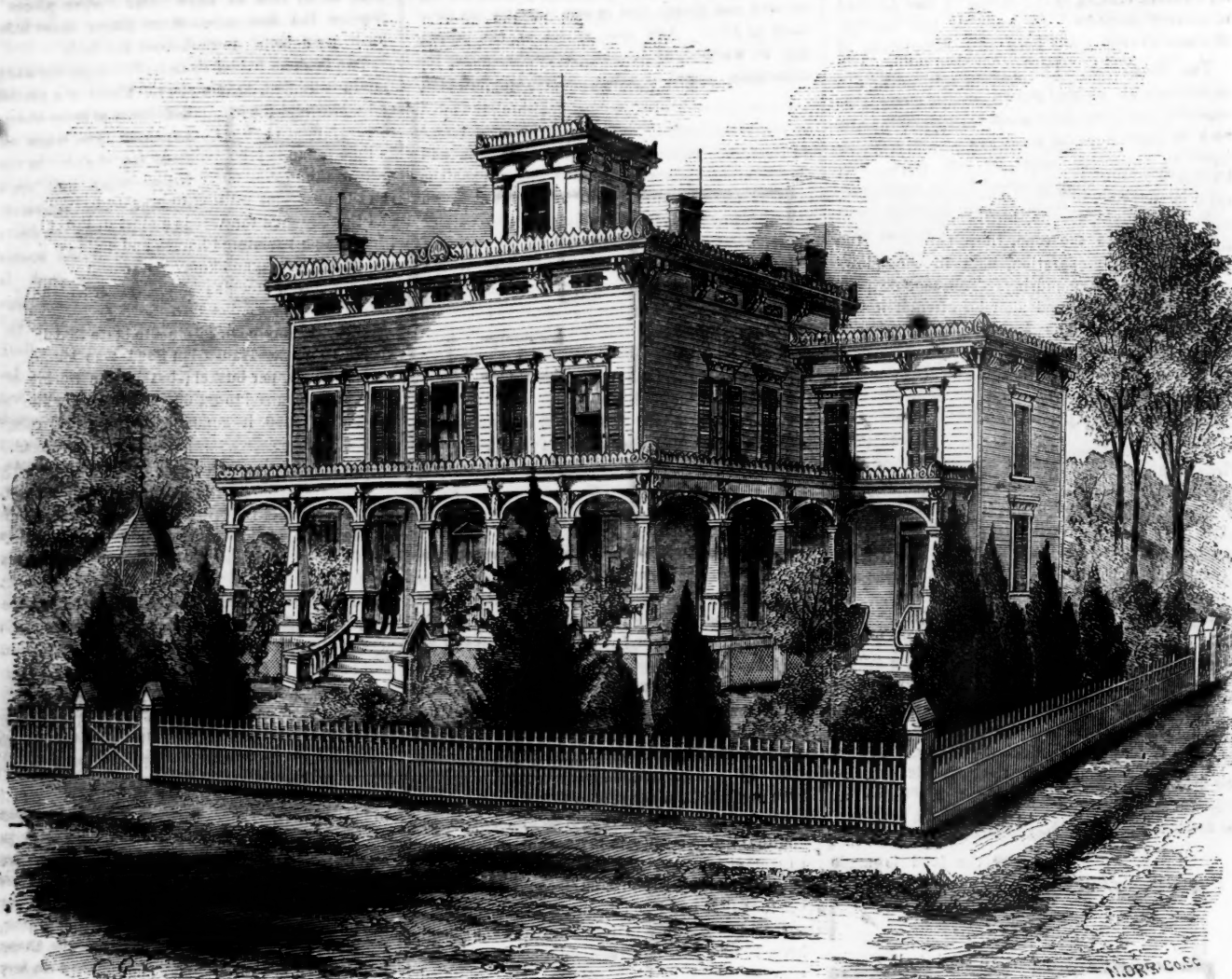
To Prevent Forked Trees from Splitting.

Every year many valuable trees, fruit and ornamental, are destroyed by the splitting of their trunks at the branching of the limbs. Surrounding the tree with iron hoops has sometimes been tried, but seldom with success. Inarching, or grafting the limbs on one side of the crotch to those on the other, has proved more efficacious. Bolting is another remedy, and, if well done, is a good one.

Several years ago, a fine maple on our premises began to split, and we treated it as follows: Taking an auger of suitable size, we bored a hole through the center of the trunk where the split appeared, and inserted an iron bolt of the same size, having a large flat head on one end, and a screw on the other. The bolt having been driven through, a nut was put on the screw-end, and turned up snugly against the tree. Since then, the tree has flourished as well as before, the bark has grown entirely over the bolt-head and screw, and no signs of splitting have again appeared. A hole is sometimes bored, and a wooden pin driven in for the same purpose.

Osier or Basket Willows.

The Connecticut Courant states that Col. Colt, of that place, has raised 35 to 50 tuns of these willows upon the dykes along his premises on the Connecticut river. So well has the experiment succeeded, that he has recently planted 17 acres besides those growing upon his dykes, and next Spring he contemplates adding 50 acres more. He is about erecting a factory which shall give employment to 80 or 100 persons in manufacturing the osiers into baskets, chairs, cradles, etc. Perhaps he will make it pay, we believe others have not generally succeeded well in this country.



A COUNTRY RESIDENCE—HOMESTEAD OF THE PUBLISHER—FLUSHING, LONG ISLAND, (N. Y.)

As it is customary to give in this journal, from time to time, sketches and somewhat minute descriptions of various kinds of dwellings, which may be suggestive in plan or mode of construction to those contemplating building, we have thought it not out of place to insert here the accompanying engravings, which were recently presented to the *Agriculturist* as a "New-Year's Gift." And as so beautiful a gift demands from us at least a fitting acknowledgment, we may be allowed to say here, that though we employ a number of different artists, yet whenever we have required an engraving done promptly, and in the best style, we have usually gone to the well known establishment of Messrs. N. Orr & Co., (Nathaniel Orr & S. M. Wood,) 52 John-st. The drawings were executed by Mr. Charles Gildemeister, the successful designer and architect of the Crystal Palace.

We might add here, that our thanks are also due to the readers of the *Agriculturist*, for, after long devoting our entire time, energy, and substance, to the firm establishment, and the elevation of the character of this journal, the generous patronage and the kind efforts to extend its circulation by its older friends and supporters, have at length placed it in such an independent position that we have felt warranted in securing a pleasant home, to which we can look forward as a permanent abiding place for ourselves and our children. By so much, therefore, our subscribers have a person-

al interest in this dwelling. We are happy to say that we have ample grounds for experimental cultivation, and for raising choice seeds, etc., which will be annually shared by our readers through our seed distribution.

When we recall the rude but cherished log dwelling in the western woods where we were born, and the subsequently cleared up farm on which we received our primary agricultural education, and then look around upon the beautiful trees, and plants, and flowers, that in their season cluster about our present home, we can but be thankful that "the lines have fallen to us in pleasant places;" and we shall labor harder than ever to help develop these blessings—these desirable home adornments—around the rural dwellings of all our readers.

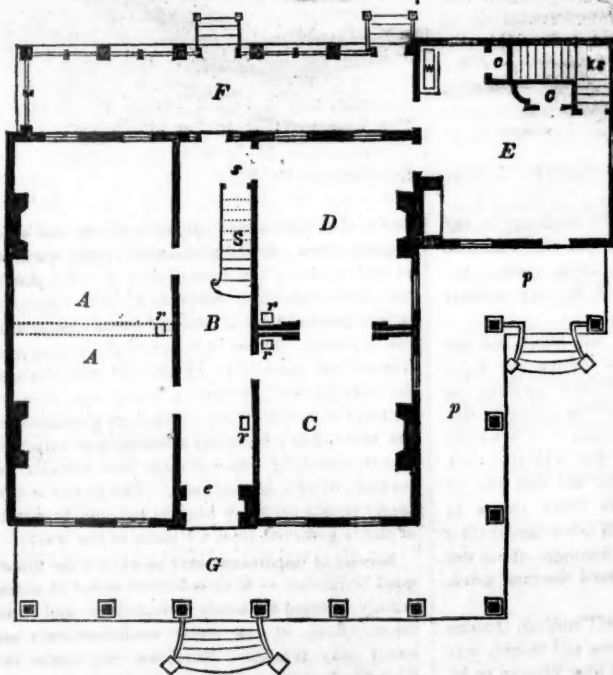
THE LOCATION, in the town of Flushing, Queens Co., L. I., is beyond the business and thickly settled portions of the village, but near enough to be convenient to schools, churches, etc. Flushing has attractions for the lovers of horticulture, not excelled by any other town in our country. Almost every dwelling, even to the humblest cottage, is more or less surrounded with flowers and shrubbery. This place has long been noted for its Nurseries—which are among the oldest in the country. We thought to refer to these particularly, but can do so only briefly. First, we may name the establishment of Parsons & Co. Scattered over some 400 acres in different parts of the

town, they have about 125 acres of fruit and ornamental trees. If we mistake not, more attention is here given to the propagation of rare plants, and those difficult of cultivation, and especially of evergreens, than at any other establishment in the country. There are several propagating houses, and more than an acre of cold frames, for starting and protecting seeds and slips or cuttings of various trees. Ten large green-houses are devoted to cultivating a numberless variety of plants, including especially the rare orchids, camellias, ericas, azaleas, etc. The visitor will be amply repaid for a trip here to see the thousands of plants gathered from all parts of the world.

Second in importance may be named the Bloodgood Nurseries of King & Ripley, some 75 acres, mainly devoted to hardy ornamental and fruit trees. Both of the above establishments are every way reliable. Third, we may name the Linnæan Nursery, which in former times, under the care of the two elder Princes, both now deceased, was the most noted, and only extensive nursery then in the country. Fourth, we may note the grounds of Daniel Higgins, who has some 40 or 50 acres devoted to various nursery purposes, but principally to ornamental trees. Then there is the Nursery of Geo. D. Kimber, devoted also in part to ornamental trees. There are, besides, several persons who cultivate garden plants for sale. Altogether, we doubt if a more interesting variety of trees and plants can be found in the same

space on this side of the Atlantic, though Rochester excels Flushing in the extent of land devoted to nursery purposes. So much for the locality. We now devote a few lines to a description of

THE DWELLING.—The elevation and outward appearance are so well shown in the engraving, opposite, that little description is necessary. The view is taken from the southwest. The building fronts on a spacious street 96 feet wide. The kitchen is in the wing attached to the southeastern side, and though standing back from the main part, commands a view of both the front and side streets, and is almost as pleasant in location as any other room in the house. The gate on the side street furnishes ready access to both the front and rear of the kitchen, and to the rear of the house. A wide Piazza passes along the front and around the south side, and in front of the wing. The Observatory overlooks the village and surrounding country, and from it may be seen a part of Long Island Sound, the southern portion of Westchester County, and the Palisades on the Hudson River. The roof is tinned and painted, and the building furnished with outside close shutters and inside blinds. A hexagonal lattice-work summer-house, surmounted with compass points and weather vane, is seen in the left. Flagged walks extend from the streets to and around the house. These are lined with flower borders and shrubbery. The grounds in front are supplied with a variety of deciduous and evergreen trees and shrubs, which partly seclude the house from the street,—a portion of these are purposely omitted in the sketch, in order to show the architectural structure of the dwelling. The out-buildings are located in the rear, back of which are the grounds in cultivation. The structure is of wood, the walls being filled in with brick. The cellar under the main building is partly above ground.

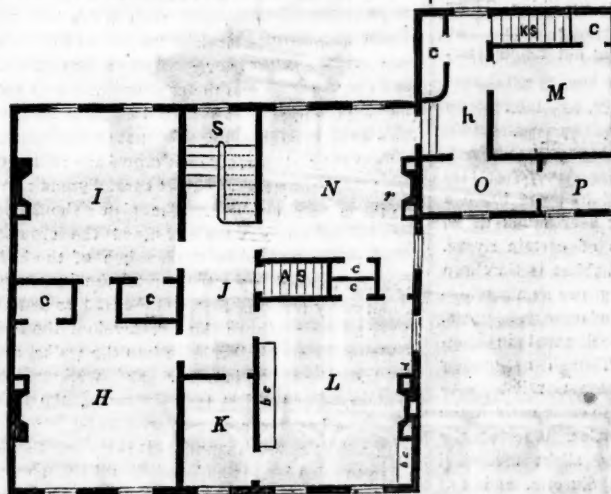


GROUND PLAN OR FIRST FLOOR.

A, A, Drawing Room or Main Parlor, with hanging arch in middle, 33x15—B, Main Hall, 30x6½—C, Parlor or Sitting Room, 16x13½—D, Dining Room, 16x13½—E, Kitchen, 17x17—F, Conservatory, or Play Room, 35x7½—G, Main Stairs—H, Piazza, 42x8½—p, p, Piazza, 7½ f. wide—s, Front Entrance, set back 2½ feet—r, r, r, r, Hot air Registers—s, cellar stairs—k, Kitchen Stairs—c, c, Closets or pantries—w, Sink over cistern, with double force-pump to carry water to the bath-room above.

THE GROUND PLAN.—The reference figures explain the internal arrangement pretty fully. The rooms on this floor are 11 feet high in the clear. They are warmed by one of Sanford's Portable Heaters, in the cellar. Hot air pipes

also lead up through the chimney flues to the nursery and library, and to one room in the third story or Attic. Any one, or all of the rooms may be warmed, as desired. Notwithstanding the objections, urged by some, to hot air furnaces,



SECOND STORY OR CHAMBER PLAN.

H, Parlor Chamber or Bed-room, 15x14½—I, Bed-room, 15x15—J, Chamber Hall—K, Hall Bed-room, 11x6½—L, Library and Study, 16½x13½—N, Nursery or Family Bed-room, 14x13½—M, Bed-room, 10½x9—O, Bath-room, 10½x5—P, Water Closet, 6½x5—S, Main Stairs—A, S, Attic Stairs—K, S, Stairs to Kitchen—c, c, c, c, c, c, Closets or pantries—bc, bc, Book cases—r, r, Hot air Registers—h, Hall in Wing, 12x6½.

we believe this to be the safest, neatest, most convenient, and most comfortable mode of heating rooms. The kind of heater used, being unsurrounded with brick work, gives out rather too much heat in the cellar, but this is compensated by the fact that the floors of the first story are kept moderately warm, and young children, who are always on the floor, are less liable to take cold. Ours have the present winter, for the first time, been free from colds, though they have run out in all weathers.

—The Drawing Room, or larger Parlor, A. A. is not divided by folding doors, but has an arch over the center, as indicated by the dotted lines. The smaller Parlor or Sitting room, C. is shut off from the Dining Room D. by folding doors. The defects in the arrangement of this floor, which we should have avoided, had we planned the house, and which we shall remedy, are: first, there are not closets or pantries enough; and second, there should be stairs descending directly from the kitchen to the cellar. The present access to the cellar is under the main hall stairs, S. and by an outside passage between the two sets of steps in the rear of the house.

The Conservatory, F. is shut in by glass above the wainscoting, and was designed for plants in part, but we prefer to keep it more as a play room for the children, where they may romp and exercise in cold air and in sunlight, when

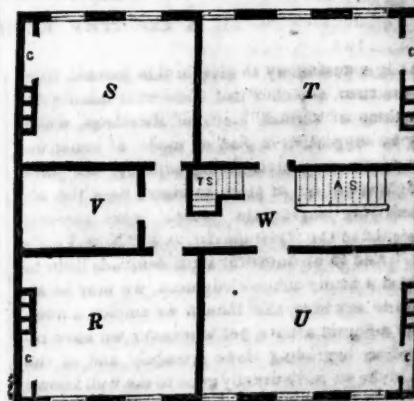
kept in by rain or snow. Our "olive plants" require the first care—other plants must bide their time until green-houses are built.

THE SECOND FLOOR PLAN.—The height between joints is 9½ feet, in this story. There is a partial

deficiency of large closet here also. The warm air from the register in the lower main hall, rises through the stairway, and by opening the doors leading in to the rooms I, H, K, the chill is taken off, and the rooms made comfortable in the coldest weather. Both the Nursery and the Library are warmed by hot air coming up through pipes in the chimney flues, put in after the construction of the house. The one in the nursery, N. is very convenient, as the room can be readily warmed in the evening, the register be then closed, and opened again when young children are to be washed and dressed

in the morning. So also, we can quickly warm up the Library or Study, when we wish to run in at any time of the day or evening to write a few moments—for in this room much of our writing for the *Agriculturist* is done.

THE ATTIC OR THIRD FLOOR.—The rooms here are 6½ feet high at the eaves, and 7½ feet high in the middle. There are, therefore, four good rooms, besides the dark Store-room V. These are convenient for hired help, when boarded in the family. We often wonder at the economy, which, to save a foot or two of wall in height, leads those building houses, to make the attic rooms so low



THIRD STORY OR ATTIC.

R, Bed-room, 15½x12½—S, Bed-room, 15½x12½—T, Bed-room, 19½x12½—U, Bed-room, 19½x12½—V, Dark Store-room, 10½x7—W, Attic Hall, 35x7—A, S, Attic Stairs—T, S, Stairs to Observatory—c, c, c, c, c, c, closets—r, Hot air Register—4 chimneys with flues shown.

as to be nearly useless. A very few dollars will suffice to carry up the walls high enough to give an abundance of sleeping apartments, or store-rooms, as may be desired.

We have thus given the general plan and arrangement of the house as it is. It is pretty convenient, though somewhat different from what we should have made it, if we had planned it originally. More pantries and closets should be provided on every floor, a stairway should lead directly from the kitchen to the main

cellar; and another pair of stairs should have been provided, leading from the wing directly up to the attic or third story, without requiring the use of the main hall.

The outside architecture is to our liking. There are few angles or joinings, to spring leaks. The ornamental work is tasteful but not finical, tawdry, or expensive.

Asparagus—Cultivation.

This vegetable is supposed by some to be a native of England, it having been found there, growing wild on the shores of certain rivers. Others assert that its native habitat is Southern Russia and Poland, where it grows so abundantly as to be used for the food of oxen and horses. It has, however, been long acclimated in England and on this continent. Though not greatly nutritious, it makes a pleasant relish with other food, and coming into use quite early in the Spring, it is universally popular. Besides, the doctors say that it has some slight medicinal properties: "it is an active diuretic, and is of considerable value in obstructions of the urinary organs. It is also anti-scorbutic." An extract has been made from it, called *Asparagene*, which is used in several diseases. For these several reasons, if for no others, this vegetable has been used by mankind, almost from time immemorial.

The most common method of cultivation is this: To prepare the ground for receiving the roots, take out the soil eighteen inches or two feet deep over the whole space of your proposed bed, put in at the bottom several inches thick of broken bricks, old bones, horn piths, leather, old mortar, and what not; then fill up the trench with light, warm soil, heavily manured, and plant the roots of the asparagus on the top, covering them with a few inches of earth. Most excellent asparagus has been grown in this way, and many still insist that it is the only way. Hear Mr. Buist, no mean authority in such matters: "The best ground for asparagus is a light, sandy loam, at least two feet deep. Before planting, it should be dug very deep or trenched, burying in plenty of manure. The ground can scarcely be too rich, for the sweetness and tenderness of the shoots depend on the rapidity of the growth, which is greatly promoted by the richness of the soil." Of course, asparagus will live amid the sands of the sea-shore, and on the *steppes* of Asia, but to ensure a rapid and succulent growth, desirable to fit it for a table dish, a warm, rich and deep soil seems essential. In gardens where the soil is naturally deep and rich, less trenching and manuring will be needful. Of one thing we are convinced by experience, viz.: that the soil must be suitably dry. If naturally wet and cold, it must be drained, and if it can not be drained let the bed be built up a foot or eighteen inches above the ordinary surface of the garden.

To propagate from seeds prepare a temporary, bed in any common soil, the same as for beets or onions. The numerous varieties may all be resolved into two, the *green-top* and the *purple-top*, the last being the best. (The *Giant* sort, sometimes highly extolled, is gigantic only when well manured). Sow the seeds early in Spring, thinly in drills, about an inch and a half deep, and in rows eighteen inches apart. Keep the beds free from weeds during the Summer, water the plants in very dry weather, and in the Fall cover them with leaves or strawy litter, two or three inches deep. Next Spring the plants will be in a good state for setting out in permanent beds. For an ordinary family, a bed eighteen feet long and five

wide, will furnish an abundance. As a general thing much time will be saved by buying one or two year old roots from nurserymen or commercial gardeners, who usually keep a stock on hand.

The permanent bed having been prepared reasonably deep, rich, and with a dry bottom, stretch a line across it lengthwise, and with a spade cut a small furrow six inches deep. Now, take up the roots from the seed-bed with care not to break them, and set them out again in the furrows as soon as possible, so as not to suffer them to become at all dry. Do not crowd the roots into a hole, but spread them out carefully and mingle the soil among them. The plants should be nine inches apart in the rows, and the crowns about two inches below the surface of the bed. The first row being planted, stretch the line again, a foot away from the first, and proceed as before. After all the roots are planted, level off the bed, raking stones and all rubbish into the walks, and finish off the edges in a neat and workmanlike manner. For the first two Summers, the beds should be kept clean, and every Fall be covered with a light coat of manure. It is the practice of some to raise lettuce and radishes between the rows for two or three years; but, as Mr. Loudon says, "it is a questionable practice, and should by no means be continued after the plants have come into bearing." The third year from seed, the young sprouts may be cut for the table. A bed well made and afterwards cared for, will last many years.

The annual routine of culture for an established bed is this: Keep always clear of weeds. By middle of October, cut down the ripe stalks and carry to compost heap. Cover bed with three inches of manure or leaves. In Spring, rake off the coarsest part of the manure, and fork the rest into the soil, taking care not to injure the crowns of the plants. It will do no harm, even if it does little good, to sprinkle the beds every Spring with salt. There are different opinions about this practice. Keep the beds always smooth and neat. The sprouts may be used for about two months.

Have you Rhubarb or Pie Plant?

There is a great lack in the Spring, of good vegetables and fruits for the table. Beets, turnips, potatoes, cabbages, and apples, if not entirely used up, get old and wilted, and lose nearly all their freshness. The stomach longs, (*hankers* is just the word here,) for something new and green. What can be got? Something. Perhaps a few parsneps or vegetable oysters were left in the garden over the Winter. If so, make a trial of them. They are a fine appetizer. To most palates, they are sweeter and tenderer than those wintered in sand in the cellar.

But if these do not suffice, try the Rhubarb or Pie Plant. This is not as old-fashioned a vegetable as the asparagus. Twenty years ago, hardly a dollar's worth could be found in our markets; now, many thousand dollars worth are annually sold. It is good for pies; tarts, jellies, and is preserved in air-tight jars for use in Winter.

Culture—The simplest but not the quickest method is to raise it from seed, which can be bought at any seed-store. Early in Spring, prepare a patch of light, rich soil, sow in drills an inch deep, and a foot apart. The plants will be up in about a month. During the Summer, keep down the weeds, stir the soil often, and water if necessary. A few radishes sown between the rows, will be out of the way before the rhubarb has made much growth. The plants should be thinned out until they stand about one foot apart. In the Fall,

prepare permanent beds for them. Choose moderately moist land, yet not stiff and cold. Give a deep overturning, working in at the same time a lot of old manure. Set the plants three or four feet asunder, to allow for extension of leaves and roots. The crowns should be set three inches below the surface, then cover with several inches of old leaves or strawy manure, for the Winter.

This plant is a native of Tartary, and is as hardy as a burdock, and will bear hard usage, yet none responds better to good treatment. To get the best returns from it, keep the soil light and clean around the plants through the Summer, and cover them with several inches of leaves, or muck, or manure, for the Winter. This will give them a strong and early start in the Spring. Some gardeners scatter gypsum on the leaves when they are wet with dew, to give them a new impulse. The manure is to be worked in around the plants every Spring. For several years, the writer managed his plants thus, and though they were only the commonest sorts picked up at a neighboring nursery, our visitors uniformly lifted up their hands in astonishment at our mammoth-leaved plants, exclaiming: What new variety is this! In answer, we pointed to the manure-heap.

For those who do not wish to raise rhubarb from seed, it can be propagated by divisions of the roots obtained from dealers, making a plant from every eye. Wherever the improved varieties, such as the *Linnaeus*, can be purchased, it is better to do so, than to attempt to raise plants from seed, for you not only save time, but are more certain of having a good kind.

Artificial Culture—Take up a few roots in the Fall, and pack them away in boxes of dirt in the cellar. After a nap of six weeks or two months, set them in a warm closet near the kitchen stove, giving them a little water. They will grow rapidly. Persons having green-houses can set them under the staging, and they will grow without much coaxing.

Another way is to set several plants in the Fall near together by the stable-door. Before Winter sets in, put barrels over the crowns, and throw a little manure around them to keep out the frost. In the latter part of February, throw fresh horse-dung daily around the barrels, and leave on only a part of the upper head of the barrel. Cold as the weather is outside, the plants will feel the artificial Summer at their roots, and will shoot forth vigorously. Fresh manure must be frequently added as the leaves extend. By the middle or latter part of March, the barrel will be nearly full of leaves.

For those who do not want a fresh pie quite so early, the following method will answer. As soon as the snow is fairly melted, put boxes or barrels, without heads, around a few of your plants, and surround them with fresh manure, putting some inside also. This will give these plants a start of several weeks before those in the open air.

The leading varieties now grown are these: *Tobolsk*—early, red-stalked, of good flavor. *Giant*, a very large sort, with round, green stalks, often four feet long, nearly as large as a man's wrist. This is quite popular in England. *Myatt's Victoria*, large, red, rich, and earlier than the *Giant*.

Downing's Colossal, better than the last, crisp, tender, rich and large.

Myatt's Linnaeus, eclipses all; very large, and what is very important, is the *least acid* of all. And here, let us testify to Mr. Charles Downing's magnanimity in having recently published a card certifying to the great excellence of Myatt's *Linnaeus*, and its superiority to his own popular *Colossal*. Surely, we may safely say, all the good and honorable men are not dead yet.

Transplanting Forest Trees—Trees for Prairies.

To the Editor of the American Agriculturist:

I am about laying out grounds for a home upon the prairie and I wish to ask a few questions upon the selection of trees to set around the buildings, how far apart to plant them, and how they shall be set.

We have abundance of hard and soft maples, elm, linden, cotton-wood, poplar, burr-oak, black walnut and butternut. Now which of these shall I select to plant about my house. J. F. Stock.

Blue Earth Co., Min. Ter.

REMARKS.—It would be an easier matter to recommend a selection if we knew the extent of land laid off for ornamental purposes, size and position of buildings, etc. If there is sufficient room, it might be well to plant a few of each kind named, with perhaps the exception of the poplar which is not generally admired. The hard maple makes a fine tree, and if the grounds be large, a small sugar grove might be planted for both ornament and profit. So too we would plant freely of the black walnut, a stately wide spreading, and quick growing tree, valuable for its fruit. A few evergreens of some sort should by all means be planted to afford a contrast in Winter and serve as a screen or hedge against severe blasts. Set evergreens and low growing trees or shrubs near the house, with the tall growing deciduous sorts at a distance. We have often seen one dense mass of trees so encircling the house that scarcely a single ray of sunlight could reach it to dry up the moisture after a rain. A little sunshine is desirable.

Persons often set their trees quite thickly at first, and as they crowd upon each other, remove the least valuable. The objection to this is that the really desirable trees are crowded and grow slowly, also that few persons have the courage to cut out the surplus when once growing finely.

Set the trees as early as practicable in Spring. Select trees from the outskirts of the forest, take them up with as many roots as possible, head back the leading shoots to induce side branches, and plant in a wide, moderately deep hole, and there will be little danger of failure, unless the season prove very dry, in which case a mulch or coating of straw, leaves, or tan bark will be serviceable.

Two Kinds of American Mountain Ash.

It does not seem to be generally known that there are two sorts of Mountain Ash indigenous to this State. One kind, which is the true *Sorbus Americana*, has its flowers in an upright corymb, but the weight of the fruit at length reverses it, and makes it pendant. The berries are of an orange scarlet color. This variety abounds in the neighborhood of Pultneyville, and doubtless in other parts of this State.

The other species, *Sorbus microcarpa*, has smaller flowers and fruit, and the corymb remains erect. The fruit is scarlet. It grows in considerable numbers among the rocks at Little Falls, on the Mohawk river. Both sorts are worth planting.

Grafting Knives.

A. T. Northup of Otsego Co., N. Y., sends the drawing of a grafting knife, of which fig. 1 is an engraving, and asks if there is a better form. This form will answer tolerably well. It is made wholly of iron, except that the knife or chisel portion seen at *k* is sometimes of steel, which is preferable. The cutting edge is hollowed so as to cut upon the outer portions of the

branch before splitting the center. The wedge, *w*, is used to hold the split open while inserting the cions, and the hook, *h*, is convenient for hanging the implement upon a limb of the tree. The objections are that, to have a sufficiently strong tool, with a thick back to the knife portion, the



Fig. 1.

blade is too obtuse, splitting the limb in advance of cutting; and there is no guard to regulate the depth of split. We prefer the knife shown at fig. 2., in which a thin steel blade is riveted to an iron back, having a wooden handle at one end, and a wedge at the other. This makes a smooth, clean cut for the cions, the frame back preventing it from entering too far. If it is desirable to hang

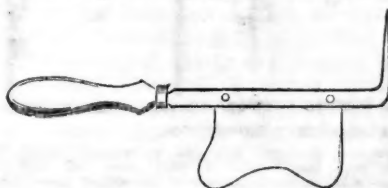


Fig. 2.

it up, a hook can be screwed into or otherwise attached to the end of the handle. In fig. 2, the wedge portion is rather close to the knife or chisel.

In fig. 3 is still another form, much used in some parts of the country. The iron or steel blade is curved upon its edge, and terminates with a wedge. It is quite convenient, and can be



Fig. 3.

hung up by the wedge portion, which is a little bent. As in fig. 1, the back has to be so thick to give sufficient strength, as to make a rather blunt edge, with no guard to prevent splitting too far.

Ringling the Grape.

To the Editor of the American Agriculturist:

I have been a cultivator of grapes for twenty seven years, and during the past three years I have practiced ringling some of my vines. The result is, that it produces very large, watery, acid fruit. I have raised bunches that were estimated to weigh one pound each, but they were not fit to eat. It is said that they ripen earlier for this process, but I think it is a mistake. They only color a few days sooner, and never ripen at all. I have never found one bunch fit to eat, although one year I took the premium at our county fair for these sour, overgrown grapes, and that too when there were good, sweet, ripe, delicious clusters lying by the side of mine. I have never been troubled with mildew or blight, and have never failed to grow a good crop of grapes.

Monroe Co., N. Y.

E. FERGUSON.

REMARKS.—These experiments of ringling the vine coincide very nearly with our own trials, as detailed on page 367, of last volume (Dec. No.). A writer in a late number of the (English) Gardeners' Chronicle, practiced it upon his Black Hamburgs, which made them show earlier signs of ripening, and they were of increased size, but failed to color, which he considered a fatal objection to the experiment.—Ed.]

Raising Grapes from Seed.

This is easily done. The seeds designed for sowing should not be allowed to become dry and hard (as they will if put away like other seeds in papers or boxes); if they become very dry, they will seldom vegetate. The proper way is to save them at the time of eating the fruit, and mix them at once in sand or other earth, to keep them moderately moist until the following Spring, when they should be sowed in drills like apple or other fruit seeds. As to the choice of seeds for sowing, there are different opinions. The celebrated pomologist, Van Mons, held that seeds from new varieties of fruit were much more likely to produce improved sorts than seeds from old varieties. For instance, seeds of the Delaware or Rebecca grape (being, as it is supposed of comparatively recent origin) would be more likely to produce superior seedlings than those from the Isabella or Catawba, which are considerably older. Others hold that it matters little what seeds are sown; and, as a ground for their opinion, they refer to the many excellent seedling fruits of all sorts springing up by chance in various parts of the country.

Whatever seeds are planted, there is no certainty of getting improved varieties. There is a strong tendency in all plants to revert to the original wild type. Of a hundred grape seeds sown, doubtless ninety-nine of the plants will not be worth raising. In order to determine which of the seedlings promise best, Mr. Longworth, the Grape-King of the West, has somewhere given this rule: "Where the stem is hairy, I throw them aside without waiting to see them fruit. The less white on the under side of the leaf, the better the promise." Another fruit-grower of note, goes so far as to say that all the plants which come up the first year after sowing are nearly worthless, and may as well be thrown away at first as not. Those which spring up the second year, he saves. The first year plants he considers to have an excess of wood-making force, and to be wild and coarse in every respect. The second year plants being slow to start, have less of mere vegetable force, and have a nicer organization, which will show itself in finer fruit.

Yet after all, this is a very uncertain way of propagating new sorts. To make surer and quicker work of it, we should resort to hybridization—i.e., to the cross-breeding of different sorts. A half-dozen carefully hybridized seeds will be more likely to furnish a superior new grape than many hundreds of chance gathered seeds. As the young seedlings are more likely to partake of the constitution of the female parent than of the male, it is best to take a good, hardy, native grape and cross it with a fine foreign variety. For example: to get a new black grape, we might impregnate the pistils of the Concord or Logan, with pollen from the Black Hamburg. To get a new red grape, we might fertilize the pistils of the Diana or Delaware, with the pollen of the Rose Chasselas. To get a new white grape, we might cross the Rebecca or Golden Clinton with the Golden Chasselas. Plants raised from seeds so hybridized, will be likely to inherit the hardiness and early ripening qualities of the native plant, together with more or less of the fine flavor of the exotic.

There is, however, one practical difficulty to be provided against. The foreign varieties being almost necessarily grown under glass, will naturally blossom earlier than the natives in the open air: therefore, the natives to be experimented on should be brought into the grapery in pots, that both may blossom at the same time, and the work

of hybridization be more conveniently performed. We are told, however, that if sufficient care be taken, the pollen of the exotic may be gathered in a glass phial, and kept until the natives in the open air come into flower.

Whichever course is taken, let the hybridizer proceed as follows: Cut off three quarters of the buds on every bunch to be treated, leaving only the strongest buds. Watch them as they come into flower, and just before they are fully expanded, clip off the anthers with a pair of scissors before they have burst and so scattered their pollen on the stigmas: if they do this, your work is lost. Having removed the anthers, go to the exotic vines, and with a camel's hair brush, take pollen from the flowers, and rub it on the stigmas of the native sorts. Do this to as many bunches as you have time and patience to experiment with, and repeat the process several days in succession, until it is quite certain that the work has been effectually done. If the impregnation has been effected, the embryo at the base of each pistil will soon begin to enlarge; if it has not, the embryo or berry will remain unchanged. When seeds so raised have ripened, gather and keep as above.



Raising Grapes in Pots.

Just now there is no little interest in this subject, and we are glad to see and encourage it. There is no prettier sight than a vigorous little vine growing in a diminutive pot of earth, but loaded down with delicious clusters of grapes. Flowers in pots are always beautiful, but grapevines in pots or tubs have both beauty and utility—they strikingly illustrate the force of the Latin phrase "*utile cum dulce*." And what is still more interesting, this species of culture is within the reach of every class of persons, the dwellers in cities and villages as well as country residents, as we shall speak of before we get through. Inquiries for information on the subject constantly reach us, to which we cheerfully respond.

Grape-vines are raised in pots with two distinct objects in view; first for propagating vines for planting afterwards in the open ground or vinery; and second for growing exotic vines wholly in pots under glass, simply for the fruit.

1. Of the newer native sorts, probably many

millions of young plants will be propagated in pots the coming Spring, and yet the indications are that they will hardly suffice for the demand.



Fig. 2.

The pieces are prepared as follows: In the latter part of this month or early in March, prepare the cuttings. Choose plump and ripe wood, cut it into small pieces having a single bud to each, with about an inch of wood above and below. This amount of stem is considered necessary to furnish food for the young plant before it is able to draw it from the ground. Fig. 2 may represent a bud prepared for striking. Now prepare a simple hot-bed,

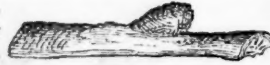


Fig. 3.

made of two or three feet of partially decayed manure, well turned over and sweetened with ashes or lime. Cover this with six or eight inches of good sandy soil. If neither pots nor boxes can be had, the eyes may be set out in the prepared earth; but experience shows that it is better to use pots or shallow boxes with holes in the bottom, planting the buds in these and then plunging them in the hot-bed. The pots (three-inch pots) should have a few pieces of broken crocks or charcoal, or oyster-shells at the bottom; over these lay a little moss, then fill half full with good vegetable mold; afterwards fill half the remaining space with sand. Now, lay in the bud, and fill up the pot with sand, pressing it down firmly. Some maintain that the buds "strike" better if split, as shown in fig. 2. Let the pots be plunged in the hot-bed up to their rims. Maintain a heat of about 70° to 75° by day, and 55° to 60° by night. The pots of course are to be kept under glass during the cold weather. Keep the air under the glass close and moist.

In the course of a month or six weeks, they will have made shoots an inch or two long, when they should be shifted into larger pots. As soon as the shoots get six or eight inches long, they should be transferred to still larger pots: those of a quart size being large enough for ordinary purposes. If it is desired to raise exotics (foreign vines) for pot-culture, and to fruit the next year, they should be shifted again into gallon-pots, and their growth encouraged as much as possible. For the native sorts, forcing their growth throughout the Summer is not to be recommended. By the method above stated, they will make good healthy plants by Autumn.

2. A few words as to the uses and methods of growing grapes in pots for fruiting. In this practice, there are advantages and disadvantages. Of the latter, we may mention the extra care and time needful in transplanting and watering, the expense and trouble of raising a succession of young vines to supply the places of those exhausted, of providing pots and tubs, tank for manure water, etc., etc. Of the advantages, much may be said. It is suited to the circumstances and wants of amateurs and small gardeners, etc. Any one having a small green-house can grow grapes in pots. He can either buy his young plants, or can start them himself in a little forcing-house, and then bring them on to the shelves of his green-house. There, they will not interfere with his other plants (many of them being taken to and plunged in the open garden in Summer), and the berries will ripen as well as in a regular vinery. The poor man who can not afford the luxury of a green-house or grapery, can at least build him a shed, in size according to his means, and cover it with a few sash. Humble as the building looks, and destitute as it is of wide and costly borders, he may grow pot-grapes there-

in as well as in the most splendid vinery. The man of business, who has only a little back-yard in a city lot, can put up a glass house, eight or ten feet square, and work out for himself great delight in managing a dozen pots of grapes.

So, if one has a regular cold grapery, and wishes to get an earlier crop than that would furnish him, he can start a few vines in pots in his hot-house during the month of March, and after the fruit is set, he can remove these pots to the vinery or open ground even, and ripen the fruit in June or July. There is an advantage also, in the matter of preserving the fruit after ripening. By removing the pots into a cool, airy room, the fruit may be kept on the vines for three or four months perfectly fresh.

But we need not speak further of the advantages of this practice. How is the thing done? It is very simple. Buy young plants in pots, or propagate them from eyes, as already shown. If they are in quart pots, shift them into gallon pots, or boxes or kegs of the same size. A good soil for potting, may be made of rotted sods chopped fine, leaf mold, old barn-yard manure, a little lime rubbish and some bits of charcoal. Mr. J. F. Allen's formula is this: "Sods, three parts; leaf-mold, two parts; rubbish, or leached ashes, and charcoal one part." This makes a rich, porous soil in which the grape delights to ramble. Give a good watering at each shifting. Tie the

canes to stakes as they grow. When they are seven or eight feet high, pinch off the ends, and continue the pinching as the buds push. By the last of July, transfer them to their final boxes for fruiting, which should be of three or four gallons size. Use the soil described above. For the remainder of the season, treat them in all respects like vines planted in the borders of a vinery, and by Autumn they will have made good wood for

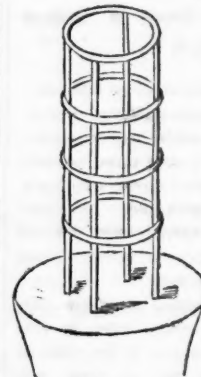


Fig. 4.

next year's fruiting. In the Fall, prune back to two or three buds; if very weak, cut down to one bud, and give a fresh supply of compost. Some advise to shorten in the longest roots in the Fall. Protect them from frost during the Winter, and give the roots just enough water to prevent their drying up.

In training the vines next year, a very neat way is to use wire supports in the form of a circular trellis, like fig. 4. If the roots are allowed to strike through the holes at the bottom of the pot into the soil beneath, the canes will become strong enough to bear fruit the succeeding year; though it is the doctrine of some that pot vines should rest every other year. In the Fall, cut off the roots which have struck into the soil below, clean the pots and wash the canes with the mixture commonly used in graperies. Now lay down the canes for their winter nap. We should add that, during the growing season, the vines should have frequent waterings of liquid manure. Drainage from the dung heap well diluted may be used, or guano dissolved at the rate of one ounce to a gallon of water. In all other respects but those now mentioned, the treatment of grapes in pots is similar to that employed in ordinary culture.

Mr. Chorlton recommends the following as the best five varieties for pot-culture: Black Hamburgh, Chasselas Fontainebleau, Grisly Frontignan, White Frontignan, and also Black Prince.

Winter attention to the Orchard.

The good price realized for apples, the present season, should lead the farmer to give his orchard a fair chance to keep up its bearing. If upon new land, or rich meadow, it may bear well for a succession of years. But eventually it will want manuring, upon almost any soil. It should have attention every year, even if it is not matured.

Pruning should not be delayed beyond the middle of this month, unless deferred until mid-summer, which is a preferable season. Remove all dead limbs, and the small limbs that cross each other. An inverted umbrella is a good shape for the head of small trees. Remove the loose bark by scraping, and the scale bugs and other insects by washing with soft-soap and water, mixed half and half. Examine all the small limbs for cocoons of insects. A young orchard thrives much better to be cultivated and cropped with roots for the first five years. Manure liberally, and make a deep rich soil for the roots to penetrate in after years. Apple trees in grass ground do better for mulching. We have seen stone heaps made around them with decided advantage. But decomposed muck is better, and good compost from the barn cellar, a load to a tree, is better still—now is a good time to apply it.

For the American Agriculturist.

Training and Pruning Trees to induce Fruitfulness.

Every tree planter has noticed a vast difference in the tendency of fruit trees to an early, or late, or non-bearing state. Both apple and pear trees are frequently seen standing only three to four feet high in the nursery, loaded down with fruit, although no attempts had been made to dwarf them; while others, after having been planted out for years, continue to make a strong annual growth but disappoint their owner in fruit. As a general thing those trees thrown into early bearing were checked in their growth, either in root or top. The accidental laceration of the roots or branches, or girdling or barking the trunk will frequently produce this result. The fruit grower acts upon these hints and forces his too rapidly growing trees to form fruit buds. If he removes a narrow ring of bark, either from the trunk or branches, the tree receives a permanent injury although it may fruit abundantly for a year or two.

There are two methods of bringing these rapid growing trees into bearing with a permanent benefit rather than injury to the trees themselves. One is to cut back the leading shoots; and the other is to bend over the branches and confine them with strings as shown in the accompanying engraving. The object in either case is to check the flow of sap, and force into fruit buds what would otherwise form leaf and shoot buds.

This form of training is called "*quenouille*," or "conical," and is mainly practiced upon the pear, by heading back the young tree to induce side shoots, which in turn are cut back moderately, leaving them uniform upon the different sides. The outer branches are now tied down to stakes driven in the ground, thus compressing the tubes



or cells, which checks the flow of sap and induces fruit buds, instead of flowing to the extremities and pushing out new wood.

A free cutting back of the previous season's growth, especially the upright or leading shoots, also tends to develop fruit buds and at the same time forms a neat compact head to the tree.

This heading back and tying down can appropriately be done during the mild Winter days, and if the tree has sufficient age, it will form buds the next Summer, and they in turn will develop into flowers and fruit the following season. *



PEREGRINE WHITE'S APPLE TREE.

A Jog in the Fruit Garden.

A Farmer.—So you call this a fruit-garden, hey? Why don't you call it an orchard or a garden-patch, one or t'other?

One of the Editors.—Oh, because it is a mixed garden, containing both vegetables and the smaller fruits. Look around here, see these beets, melons, dwarf-pears, dwarf-cherries, currants, grapes, and what not.

Farmer.—Well, let that go. Now please tell me about these dwarf pears—who first thought of grafting a pear-tree on a quince-bush: I'd like to know.

Editor.—Can't tell you, sir, nor who first practiced grafting at all. There are many stories about it in Pliny and other ancient writers, which are neither true nor ingenious. If the discovery had occurred in our day, it would have made the man immortal as a great benefactor of his race.

Farmer.—There used to be pretty good apples in this country, and a plenty of them too, especially in New-England, before grafting was practiced here. Farmers used to plow their land and sow apple-pomace and raise orchards from the seedlings.

Editor.—Yes, and good cider was made here, from the very first. I have in my pocket a little book containing some of the laws of Plymouth Colony, passed in the year 1667, which show that apple-juice was then a common beverage. Let me read a few lines:

"It was enacted by the Court, that no person or persons shall sell any cyder to any Indian, under the penalty of ten shillings, etc. And that none allow any persons to spend their time by tippling any cyder, liquors, &c., in their houses; and that in case any cyder be found in the custody of any Indians, it shall be lawful for any man to take it away from them."

Farmer.—Yes, yes, and it would have been well if our forefathers had not given them the taste of fire-water at all. But, don't you know that our ancestors raised pears, as well as ap-

ples? Of course, you have read of the famous Endicott pear-tree, at Danvers, Mass., which bore fruit upwards of two hundred years; and of the Stuyvesant pear-tree at the corner of 3d-avenue and 13th-street, in New-York, only about thirty years younger than the other, and which still blossoms and bears fruit.

Editor.—Yes, I have heard of them, and seen the Stuyvesant tree. [Here, by the way, is a picture of an apple-tree planted at Plymouth by Peregrine White, the first child born after the landing of the Pilgrims. I don't know whether it

is standing now or not. It was upward of two hundred years old when this drawing was made.] I have noticed the grand old pear-trees still alive, which the French planted along the line of the Lakes and down the Ohio River, as early as the beginning of the eighteenth century. Yes, we had fruits in America, before we had fruit-books or agricultural papers. Occasionally, in those early times, the newspapers inserted paragraphs on farming and gardening, in which many wise things appeared, such, for instance, as these: "If you inoculate the stock of a tree with mercurial

ointment, it will poison all the insects which infest it!" So that Tyler's calomel tree powder was only an old humbug revived. "If a pear-scion be grafted on an apple-stock, the scion will gradually change into an apple branch and bear apples! A cutting of an apple-tree will bear fruit in a very few years, if it is inserted in a potato and then planted!" All of which were in keeping with Virgil's fable of grafting the apple on the oak, and of procuring a new race of bees from the carcass of an ox!

Farmer.—That's what I should call "book-farming," in earnest. But now, tell me why pear-trees don't live as long now-a-days, as they used to? I lose several trees every year, and so do my neighbors, far and near. Has the climate changed, or is the soil worn out, or do we prune and manure them to death? What's the trouble?

Editor.—Terrible hard questions, those. As to our climate, doubtless the cutting off of our forests has rendered it more changeable, more subject to drouth and severe storms, more windy and disagreeable, and more subject to extremes of temperature. But after all, the climate gets more abuse than it really deserves. Our summers are hotter than those in England, and our winters colder, but then we beat the British in raising fine fruits. Cobbett, a writer on gardening, well says: "In America, when we see the blossom, we expect the fruit will follow, but in England and France, the trees must often be covered, to protect them from the untimely frosts of April and May." Then, again, we generally ripen the apple, pear, peach and plum, without difficulty in the open air; but in England the peach can hardly be ripened without careful training on walls, and the pear and plum are generally dwarfed and trained against walls and espaliers. So too with the more delicate sorts of apples. Many of our finest peaches can not be raised there at all.

Farmer.—I stand up for Yankee-land, in spite

of all its draw-backs. And I stand up for that old stand-by, our apples. I don't wonder that our forefathers cultivated them. The trees are easy to raise, and the fruit is good for man and beast, and not the least for swine, a race not apt to relish, or to thrive on unsubstantial fare. As fruit now sells, my orchard is about the best part of my farm. Mr. Editor, how long do apple-trees live, on an average?

Editor.—I can't speak with certainty. Some say it takes twenty or thirty years to bring a tree to its full maturity, and that then it lives about as much longer, making in all about sixty years. Yet, I have heard of apple-trees over a hundred years old. Still, I am inclined to believe that the average life of a tree is not above fifty years. Probably most of the orchards now living were planted since the Revolution; and probably the kinds of apples which are now our favorites, were not such as regaled the palates of our great-grandfathers.

Farmer.—What do you mean? Did't Miles Standish and Governor Bradford and others, great and small, eat Baldwins and Russets and Newtown Pippins? I'd like to know.

Editor.—I can't tell you, sir, from history. But if a certain theory of some learned pomologists is true, no variety of apple lasts longer, on an average, than fifty or sixty years, but runs out. The pear holds out longer.

Farmer.—Please explain that humbug.

Editor.—Humbug it may be; but many sensible men have held to it. Thomas Andrew Knight, of England, is generally considered the author of the doctrine that cultivated varieties of fruit have only a limited period of life. Trees very favorably situated and well managed, might live beyond that period, but the majority would die at the allotted time. He thence drew another doctrine, viz: that all buds or cions taken from one tree and inserted in another, are only extensions of the original tree, and can not outlive it. To all lovers of fine fruit, this is an unpleasant theory, and many writers reject it.

Farmer.—What is your private opinion about it, sir?

Editor.—Perhaps, I haven't fully made up my mind. It certainly has some very stubborn facts on its side. As long as fruit trees sicken and die off, annually, as they now do, people will believe it. And if it is true, all we have to do is to keep on sowing seeds of fruit, and so raise new and good varieties to replace those which die out. And we needn't be discouraged after originating such apples as the Rhode Island Greening, Esopus Spitzenberg, Northern Spy, King, Melon, etc., and such pears as the Buffum, Dix, Lawrence, Tyson, and Seckel.

But then, perhaps this theory is *not* correct. If I had time I could say as much against it as for it. But I must go now.

Familiar Talks by the Doctor....II.

MR. EDITOR.—Thanks for your kind introduction of me to your readers. No doubt you are correct in saying that, as a class, farmers are more healthy than many, perhaps most others. Still they do suffer unnecessarily from ill health, and my hope is to enable some of your readers to avoid that suffering.

Overwork—doing too much—going beyond one's strength in bodily labor, is a very prolific cause of ill health among farmers. The reason I suppose to be this, that no class is so greatly tempted to do too much. There are certain limits to the strength of any man, and these limits are very different for different men. It is no disgrace to

you that you are not as strong as Samson, and it is no disgrace to me that I am not as strong as many a broad-shouldered six-footer whom I meet. He can load a tun of hay or lift a big hog, better than I—but I can judge of a person's pulse, or perform a surgical operation, better than he.—This is no disgrace to either of us, and I should be as unwise if I attempted to rival him in loading hay, as he would be to try to rival me in removing a tumor.

I dwell on this point because it will be easier for your readers to see by this illustration that there are very great differences in the ability of different people to do the same work, than if I had simply compared two farmers. The feeling is very common too that it is rather a shame for a man not to be able to do as much as his neighbor.—This feeling is perhaps of no consequence in itself, but it leads to results that are, from my point of view, of great importance in their influence upon the health. Thus, if a man who weighs 130 lbs and is of moderate muscular development, has heard his neighbor who weighs 160 lbs, and has large strong muscles, say that he can load a tun of hay in a certain time, he is very apt to attempt to do the same thing in the same time, so that he may not be thought inferior to his neighbor. The result may be that he makes himself an invalid for the rest of his life. Or a farmer may employ a hand to help him during haying, and insist on "keeping out of his way" when they are mowing together. It requires immense exertion, but he does it, his ambition making up whatever deficiency there may be in strength. This gratification is, however, dearly paid for by the years of ill health which may follow a single effort of this kind.

The illustration which I use in talking directly to men of such things is this. If you have two valuable horses, one of which weighs 800 lbs, and the other 1100 lbs, would you risk injuring the lighter one by setting him to draw a load which is full as much as the heavier one can pull? Or, if the one that weighs 800 lbs can travel 10 miles in an hour easily, and the speed of the other is fairly rated at 8 miles an hour, would you attempt to make the large one always go 10 miles in the hour? Well, overwork is just as likely to damage you as your horse, and perhaps more likely to, and if you will not risk your horse—why do you risk yourself?

The contrast is still more striking when you remember that a hot day in June or July is just the day when you are particularly careful not to drive your horse too fast, or with too heavy a load, and yet it is just the day in which you will be most apt to over-exert yourself, especially if you are haying. Many a man takes better care of his horse, because it has a money value, than he does of himself, when a whole family may depend for their comfort on him.

But there is another way of farmers overworking themselves, which is still more common, in many respects more injurious than that which I have described. I mean by always having a little *less* help in carrying on their farm than they need. Thus if a farmer needs four men to carry on his farm, and he never hires but three, the consequence is that he will be constantly doing more than his strength is equal to. His men will not, as a general thing, do more than a fair day's work, (no one does for hire), and they ought not to be blamed for it. But the deficiency must be made up in the main by the farmer himself. It is not a month since I was consulted by a young man who has probably made himself an invalid for the rest of his life in precisely this way.

Does any one want to know what the effects of overwork are. Let him try overworking his

cattle or his horses for a year, and he will see some of the effects, for they are not always the same. I shall not attempt here to describe them, but every one may rely upon it, that if he continues to do more than he is able, he will have to pay for it. If you have an iron constitution, remember that iron will not bear every thing. If it is broken, it may be patched up, but not made as good as new.

Now it remains for me to add, that if we are poor and unable to obtain all the assistance we need, we must all often overwork ourselves.—Of course, in such a case we are *compelled* to run the risk of whatever results may follow. But this is one of the evils of poverty. There is however no such excuse for a man who overworks himself without such necessity. For the sake of making a few dollars more, he ruins his health, which no money can restore. Doctors know what the value of health is, and let me tell any one of your readers, Mr. Editor, who with the new year is making his plans to save a hundred or two of dollars by working his farm with a less number of hands than he needs, that he had better throw that amount of money into the fire and then get all the assistance necessary to avoid overwork.

But, I have something more to say on this point, and only add now, that if your Horse is able to go 10 miles an hour, but is not inclined to go at a faster rate than 5 miles an hour, there is no harm in whipping him. So too, I trust, no lazy man will make an excuse of what I have said, to do *less* than he is able. P. H. E.

Save the Coal Ashes.

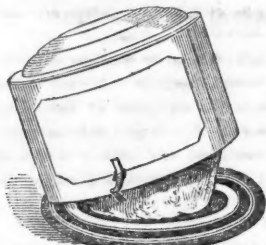
Those who use hard coal, lose a large amount of fuel in the unconsumed portions thrown out in the ashes. The ashes themselves are well worth saving to put upon the garden or field. They are alkaline, and act similarly to lime, or wood



ashes, and though much less powerful, they are well worth preserving. Sifting out the ashes is, however, a disagreeable job, and is apt to be neglected. We have now a simple, cheap apparatus which is effective, and saves all the annoyance of dust—called "Adams' Coal Sifter." It consists of a circular iron hoop forming a cylinder, say 5 inches deep and 16 inches in diameter, fitted with a strong barred sieve at the bottom. This is fastened to a shaft which is hung through a circular board, and is furnished with handles above. The board is laid upon the top of a common barrel, and the iron sieve swings down inside. The cinders are poured in through a trap door which is then closed, and by turning the handles back and forward rapidly, the ashes fall through into the bottom of the barrel. The apparatus is then lifted off, the coal poured out, and the sieve returned for a new charge. The barrel can thus be nearly filled up with fine ashes before emptying it. The apparatus can be carried home in the hand readily, and fitted to the top of any barrel. It is made strong and durable, and costs but a couple of dollars or \$2.25. Its convenience, cheapness, and freedom from dust, make it a desirable addition to the household implements.

He who seldom thinks of heaven, is not likely to get there, as the way to hit a mark is to keep the eye fixed upon it.—*Horne.*

The hard stool of repentance has no cushion.



Air-tight Provision Safe.

Among other recent additions to our stock of household conveniences, is an article which we have sketched above. It consists essentially of an iron plate, raised in the middle, and grooved around the edge; and a tin cover. In the groove in the bed-plate is placed a strip of India rubber, upon which the cover fits down. The cake, bread, meat, or other article, is set upon the iron plate, the cover placed over it with its edge upon the rubber, and it is then brought down firmly by means of two little ears or clamps. It will be readily seen that the rubber packing excludes ants and other insects, and also shuts out air. The iron plate is neatly japanned black, and the cover is also japanned on the outside with fancy colors, so that the whole is ornamental. We have as yet obtained only two small sizes; the cover of the larger ones is 9 inches in diameter, and 7 inches high. Retail price 75 cts. Larger sizes, suitable for holding several loaves of bread, will doubtless soon be made. Arrangements are being made for manufacturing these articles for market, of which due announcement will probably be made in our advertising columns—perhaps in the present number.

For the American Agriculturist.

Common Errors in Speaking.

BY ANNA HOPE.

As I came in the cars from Geneva to New-York, there sat behind me two ladies, very expensively dressed. When the cars stopped, a gentleman came to speak to them. Among other questions, he asked if it was "a pretty general time of health in Cincinnati"—a form of inquiry more peculiar than correct—and being assured that it was so, he offered his services to the ladies in any way they should require. One of them immediately opened her satchel and took from it a silver cup, requesting him to bring her water. As she handed it to him she said, "It will need to be wrenched," (she meant *rinsed*). I have not infrequently heard washer-women use this expression, but I was surprised to hear it from other lips. In my younger days I always associated education and refinement with wealth, and I well recollect my amazement when I first heard ungrammatical expressions from gentlemen and ladies, but I have grown wiser, and I find that correct English is not quite so common as I had formerly supposed.

A few hints on pronunciation and grammar may not be out of place in the *Agriculturist*, and they may call the attention of some of its readers to inaccuracies of their own that have escaped their attention, and which they would gladly correct. Different parts of the country have different peculiarities in minor errors, as well as in more important matters, but there are errors which "know no North or South, or East or West." There are very few persons who are perfectly accurate in their use of language, and even those who know better, often err in consequence of wrong influences in childhood. A New England-

er is easily distinguished from a New-Yorker and so is a Southern or a Western man by peculiarities of which they themselves are unconscious. The "nasal twang" has been generally considered peculiar to New England, but so far as my observation extends, it belongs equally to other northern States. I have noticed more of it out of New England than I ever heard in it. The finest, fullest, roundest, most musical voice I ever heard is that of a lady of Irish birth who has been educated in this country. Her words drop like pearls from her lips.

A common fault in pronunciation is not sounding the *g* at the end of such words as *farming*, *sweeping*, *dusting*, pronouncing them as if spelled *farmin*, *sweepin*, *dustin*.

Tuesday, *student*, *duty*, *dew*, *due*, *flute*, *duke*, *new* and a few other words which should have the clear sound of *u* as in *unite*, are often pronounced as if spelled with *oo*; as *Toosday*, *stooudent*, *dooty*, *doo*, etc. The proper sound of *u* in these words is one of the most beautiful in the language, and it seems a pity to dispense with it, and in its stead make *oo* do double duty. No one thinks of calling upon *u* to relieve *oo*. We never hear of a man's putting on his *bute*, nor of his *huting* at the idea of endeavoring to give the correct sound to each letter.

The unaccented vowel is too often dropped out of words, as *sat'n*, for *sat-in*, *curt'n* for *curtain*, *sudd'n* for *sudden*. When a child, I heard a member of one of the old New York families talk about *towl's*, and whether to think of it as incorrect, or as something very stylish, I scarcely knew, but I practiced upon the word till I could, in my room say *tow'l* as well as she, although I did not venture upon it elsewhere.

Al and *el* are frequently changed in speaking into *le*; as *meddle* for *medal*, *mortle* for *mortal*.

The *e* and *i* are sometimes changed into *a* or *u* in many words; as *quantaty* instead of *quantity*, *crualty* for *crudty*, *humanaty* for *humanity*.

February is often pronounced *Febuary*; *preventive*, *preventative*; *government*, *goeverment*; *cupola*, *cupalo*; *attacked*, *attackeded*; *drowned*, *drownded*; *umbrella*, *umberel* or *umberella*; *violent*, *voilent*; *afraid*, *afearad*; *chimney*, *chimley*; *awkward*, *awkard*; *errand*, *errant*, or *arrant*, or *arrandi*; *polite*, *perlite*.

A very common grammatical error is the use of *them* for *those*. "Give me *them* peaches." Shut them doors. "Open *them* windows," instead of "Give me those peaches," etc.

The objective case is sometimes used for the nominative. "*Him* and *me* are going to New-York," instead of "He and I are going" and the nominative case is also used for the objective; as "Between you and *I*," instead of "Between you and *me*." "She came to see Mary and *I*," instead of "Mary and *me*."

Who is often used where the objective *whom* is required; as "Who did you see?" "Who is this for?" instead of *whom* did you see, etc.

These and *those* are often incorrectly used instead of *this* and *that*. "Do you like *these* kind of apples?" "Those kind of potatoes are watery." You may like "these apples," and you may like "this kind" of apples, but there is no propriety in using the plural *these* with the singular *kind*. Those potatoes may be watery, but "that kind of potatoes *is* watery."

Went is often incorrectly used for *gone*; as "I should have *went* home," instead of "I should have *gone* home."

Done is used for *did*; as "I *done* it" for "I *did* it, or I *have done* it." "He *done* it," for "He *did* it."—"Hadn't ought," is used for "ought not."

Set is too often used instead of *sit*; as "Set down and rest yourselves." *Set* is an active

verb, *sit*, a neuter verb. We may *set* a chair in its place, but we must *sit* in it. A hen *sits* on her eggs, but we *set* a trap for the rat that would steal them.

The use of the active verb *lay* for the neuter verb *lie*, is very common. How often we hear it said, "I *laid* down for an hour," when it should be, "I *lay* down." We can *lay* books down, but we *lie* down ourselves. Book's *lie* on the floor after we have *laid* them there. I must *lay* my pen aside this morning or I shall be in danger of occupying more than my share of the columns of the *Agriculturist*.

Head Cheese

Is much liked by most persons as a cold relish, and is an economical way of using the coarser parts of a pig. It may be prepared as follows: Split a hog's or pig's head in two, and remove the eyes and brains. Cut off the ears, scald them and the head, and scrape them clean, removing the discolored parts. After washing well with cold water, put into a covered kettle with nearly boiling water enough to cover it. Boil gently, removing the scum from time to time, as it rises, and cook until the bones can be easily separated from the meat. Take out all the bones, chop fine and season with salt, pepper, adding sage or thyme, if liked. Enclose it in a bag or cloth, place it in a colander set in a dish to receive the drippings, and lay a plate over it with sufficient weight to press as dry as wanted. The heavier the weight, the more lean the cheese will be, as the fat is readily pressed out. Keep it in the cloth in a cool place. It should be sliced thin for table use.

ARROW-ROOT PUDDING.—Contributed to the *Agriculturist* by Mrs. J. F. King, Wayne Co., Ga., who esteems it a great luxury: Dissolve thoroughly two heaping tablespoonfuls of Arrow-Root in a little cold milk. Heat a quart of milk to a boil and pour it upon the dissolved part, stirring it very rapidly to prevent its being *lumpy*; sweeten to taste; flavor with rose, lemon, or vanilla; just before it is to be served, beat up 8 eggs, yolks and whites, separately, mix thoroughly with the Arrow-Root, and bake in a quick oven 15 or 20 minutes.

PUMPKIN FRITTERS.—From a subscriber at Somerville, N. J. Stew the pumpkin the same as for pies. To each pint of pumpkin add two quarts milk, three eggs, two teaspoonfuls saleratus, a little salt, and sugar to the taste. Stir in flour enough to make a thick batter. Drop a small portion at a time into hot lard and cook brown.

POP-OVERS.—Stir together one cup flour, one of sweet milk, one beaten egg, and butter the size of a walnut. Bake in small tin rounds—and they will be excellent for breakfast cakes. So writes a correspondent of the *Agriculturist* at Northampton, Mass.

SNOW CORN CAKES.—Take any desired quantity of Indian meal and add sugar and salt to the taste. Stir in with a spoon twice or three times its bulk of snow. Try a little on a hot griddle; if it cooks too dry to turn well, add more snow; if too wet to be light, add more meal. Bake like buckwheat cakes.

CLEANING KETTLES. A bit of pearlash, as large as a walnut, dissolved in hot water, will remove grease from iron cooking vessels, and also take out the taste left by onions or other highly flavored food.

Do good yourself, if you expect to receive any.

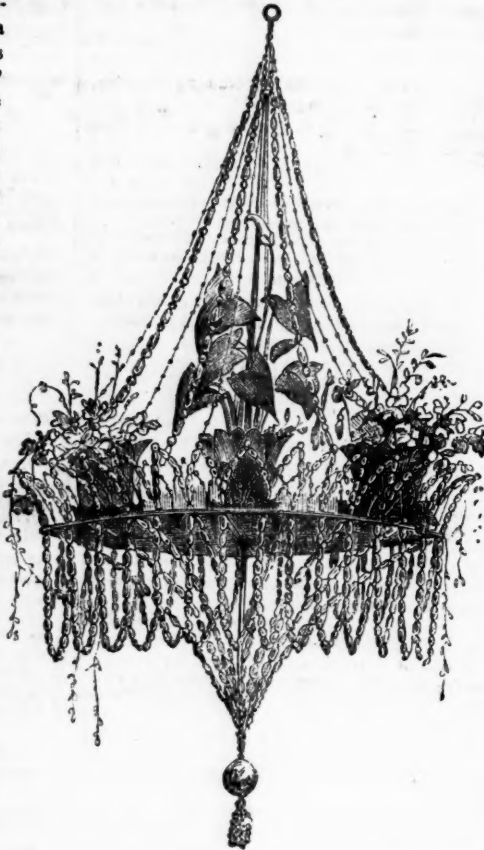
Soda Crackers—Graham Biscuits.

[In response to our inquiry last month, p. 23, for practical directions from some experienced Baker, we are favored with the following (and more for next month) from Mr. Joseph Crozer, of Trenton, N. J., who has, we believe, had much practice in this department.—Ed.]

MR. EDITOR: I notice in the January *Agriculturist* an inquiry regarding the making of Soda crackers, such as are manufactured by bakers. You may say to your lady readers in the first place, the art of the baker does not depend altogether upon the mere mixing a combination of ingredients, but his success is in a great measure due to his "ovens." Cakes, etc., baked in stoves, (such as are generally sold) would appear very different to the taste, if they were baked in an oven. But there is, also, a great difference among bakers, in the method of making soda crackers. In my experience I have found some thing like the following about the best mixture. (As I am accustomed to making up large quantities, I can not be so exact in the proportions). For Soda Crackers.—Set a "sponge" at night, the same as for bread. The amount, of course, depends upon the quantity to be made—say 1 pint of yeast, and 1 pint of water (warm or cold according to the weather), adding flour enough to give the proper stiffness or consistency. In the morning, or after it has risen and fallen again, (if it gets a little sour so much the better), add to the sponge about 1 pound of lard or butter, or half a pound of each—butter is the best—and break it up with the sponge. Then add half a handful of salt, and 1 to 1½ ounces of the best bicarbonate of soda (cooking soda) dissolved in 1 quart of water. The saleratus now sold is generally impure. Stir all together well, then mix in quickly enough flour to make it considerably stiffer than bread dough. It is not, however, mixed the same as for bread; but so as to throw the dough in parcels, or fragments. These are then rubbed over each other, somewhat like rubbing clothes on a washboard; the dough being just stiff enough to prevent their sticking to each other. When the flour is well rubbed in, press the dough in a heap together in the end of the trough or tray, and let it remain two or three hours. It is then put through the "breaking" process, and this is a peculiar treatment in making all kinds of good crackers. It may answer to beat it with a rolling pin on a solid board or table until the dough is smooth, and intimately mixed; then roll it out about ¼ inch thick; cut to any sized cakes; prick well through with a fork, or something similar; set on pans and bake quick. Bakers generally set the pans on the oven bottom—which is another feature that adds to their good qualities. The baking consists in "drying out" nearly all the moisture, and not so much in giving them a brown color. There is not so much proportion required in the amount of "sponge," but always have enough to make it ferment readily. As an experiment, a little might be taken for trial from some bread-sponge. There are several variations in this process; each preferred by different bakers. There is, however, such a peculiar treatment required in making first quality soda-crackers, that private families need hardly expect to succeed in making them like those prepared by practical bakers. I may add here, that soda crackers acquire a bad taste if kept in a close box or drawer, especial-

ly if bad ingredients are used in making them up.

Graham Crackers may be made by using unbolted flour, when mixing the sponge into dough, or some fine bran can be added to wheat flour. The soda is left out, and less shortening used, though Grahams are generally made without setting any sponge, or the use of yeast. They must be cut thicker, and not set in so hot an oven. Breaking the dough in small pieces, and molding each one by hand, makes the best crackers. C.



Inexpensive Household Ornaments...I.

PENDANT FLOWER BASKETS.

Velvet or Brussels carpets, furniture of rose-wood and damask, expensively framed pictures, and other costly embellishments, are not indispensable requisites for fitting up a room in pleasing and attractive style. All these may be present in a parlor or sitting room, and yet be so arranged as to leave no pleasant impression on the mind of the occupant, or visitor. While on the other hand, a degree of taste may be displayed in fitting and arranging the simplest natural objects or imitations of them, which shall call forth expressions of admiration, and leave a pleasant memory upon the mind of every visitor. We by no means include in this latter class of objects the so common plaster-casts—caricatures of birds that never flew, and of fruits that never grew, all gaudily daubed with bright colors.

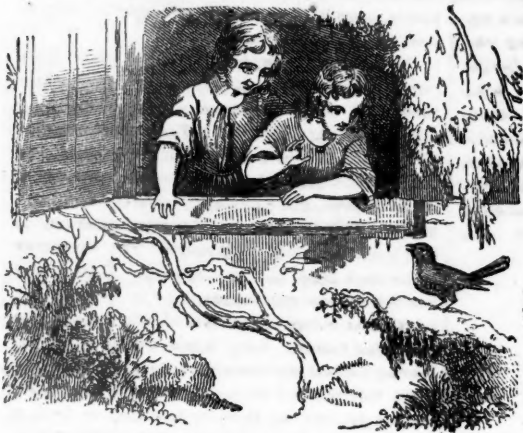
These thoughts are suggested by a recent call at the cottage of a farmer in limited circumstances. In the room used both as a parlor and family sitting room, we noticed upon the mantel some pretty sea-shells tastefully arranged. With these were bouquets of dried grasses. Hung around the room were a few choice engravings, uncolored, enclosed in frames covered with pine cones and acorns, curiously and beautifully fashioned by the daughters of the household. And more pleasing than all else were living

plants, some of them in bloom, supported on pendant baskets or stands.

We present herewith, a design for one of these pendant flower baskets, which can be cheaply made, and which is almost as ornamental as a highly wrought chandelier. The frame work consists essentially of a flat tray made of pieces of board, sheet-iron, or zinc, cut circular, or with six or eight sides, and painted, or covered with fancy paper. This is supported by wires fastened in awl holes around the outer edge. The wires may cross each other like basket-work. Upon these are strung large glass beads, or bugles (long beads), of various colors. Festoons of wire, covered in the same manner, hang below the tray. A rod having a cross-bar screwed on the lower end, may pass through the tray, and through the central flower pot, and be fitted with a ring or hook at the top to sustain the chief weight of the whole. This rod might be made of large brass wire, and also be covered with a glass tube slipped over it. A neat tassel may be suspended from the bottom wires. A light climbing plant to run up the supporting rod looks best for the center; the others around the outside should be pendulous or trailing plants....The design here described is given as suggestive; the details of the arrangement admit of any variation to suit individual tastes.

THOSE COAL-OIL HAND-LAMPS.—Since our recent description of these lamps many persons have adopted them, and generally with satisfaction. But we hear of some cases where difficulty has been experienced. The manufacturers tell us that they make little effort to introduce them widely, from the fact that there are so many poor coal oils now sold in the market that they are unwilling to risk their reputation on these lamps, which require an oil of at least moderately good quality. Then, again, kitchen help make blundering work in trimming them and in gauging the flame. We have eight of these lamps in constant use at our house and business offices, and they give entire satisfaction. We burn the Carbon oil, the only pure inodorous coal oil we have yet tried. These lamps "blow out" easily, but after a short experience this occasions little trouble. They can be carried about freely, if the single precaution be taken not to give them a quick upward motion. The wicks should be cut off evenly, and very short, and then temper the flame by raising or lowering the draft cap. They need a little watching, (though not half so much as a tallow candle), for the fluid rises faster after they are heated than when cold. We speak thus particularly, because in our own experience these lamps have proved the cheapest, and, all things considered, the best hand lamp we have yet found, and we think those who have failed to like them must have made some mistake in the mode of using them, or else poor oil has been obtained.

POTTED BEEF.—The coarser, tougher, parts of beef, as the neck-piece, etc., which usually sell quite cheap, may, by a little cooking science, be made palatable and even delicious. We have tried the following and can recommend it. Boil the meat until tender, chop it fine, and pound it with a pestle until the fibers are well separated. Salt and pepper it to taste, and add cloves, allspice, or cinnamon, as may be desirable, also a little sugar. The quantity depends upon the cook's palate. Pack it tightly in earthen jars or bowls, and pour over it a thin layer of melted butter. It will keep a long time. When used, slice it very thin and eat cold with bread and butter. It makes a nice relish for lunch or tea.



The Editor with his Young Readers.

The Snow Birds came to us later than usual, this Winter; the first one we have seen, was warbling his chick-a-dee at our window this very morning, Jan. 12, and he quickly departed; but just now there are a dozen or so more, and they remind us of that beautiful song written by our late "Uncle Frank," (Francis C. Woodworth), who also composed the music for it. Probably most of you have heard and sung both the words and tune, but we suspect that a good many of the younger boys and girls may not know them, and for their benefit we will hunt up both song and notes and put them on this page, and also give his pretty picture of the two little girls who were 'busy at play' when the Snow bird came singing at their window. We would like to have you all learn, and sing this song. We can hardly believe that any boy who sings or even reads these words, would ever after try to kill these innocent birds, as we have seen some do before now. By the way, we think

EVERY BOY OUGHT TO LEARN TO SING.

A great many boys—a few of them in our own Sunday School—seem to think it beneath their dignity to join their sisters and comrades in singing. This is a false notion. There is nothing that tends more to soften a rough, harsh nature, than to engage heartily in singing. One who was speaking of Burns, the Scottish Poet, remarks to this effect: "The Scotch are the most peaceable people in the world: very few are the quarrels or brawls occurring among them in their own land, or when they go abroad. This may, in part, be attributed to the fact that in Scotland every boy and girl learns to sing. If a company of old or young people get together for an evening, instead of disputing and gossiping, they spend most of their time in singing the sweet songs of Burns and of other poets. The children begin to sing as soon as they can speak; they all learn to sing very young, and never stop, and their songs and music have a great influence over their characters." Some one has said: "Let me make the songs of a people, and I care not who makes their laws," meaning that the songs have more power than the laws, in forming, modifying or changing characters.... If all boys were early taught to sing well, and then kept singing until they grew up, we believe there would be fewer bad, quarrelsome boys and men. Learn to sing then, boys; sing going to work; sing at the plow; sing every where when you will not disturb others. Don't let any anybody frighten you by telling you, you can not sing. We believe that about every boy, who is not a deaf mute, can sing, and with proper training can sing well too.

A PLEASANT PLAY.

A friend of the Agriculturist Family sends us the following description of a play for the young folks, and old folks too, which we like because it sets them to thinking, and is also good sport. One of the company repeats a few lines of poetry, or a familiar proverb, or relates a short anecdote. When he has finished, another quotation is to be repeated by whoever can first think of one commencing with the same letter that closed the previous recitation. One may say

"Art is long and time is fleeting,
And our hearts though stout and brave,
Still like muffled drums are beating
Funeral marches to the grave."

The next one must commence his piece with the letter E—for example thus: "Every wind is fair that drives to port." Then T, will be the initial letter, and so on. The play may be varied by making it a geographical or historical exercise. Thus, one names a town, and describes its location, the next one gives a geographical or historical name commencing with the last letter of the word chosen

UNCLE FRANK'S SONG AND MUSIC OF THE CHICK-A-DEE.



He had not been singing that tune very long,
Ere Emily heard him, so loud was his song.—
"O sister! look out of the window," said she;
"Here's a dear little bird, singing chick-a-dee."
Chick-a-dee, &c.

"Poor fellow! he walks in the snow and the sleet,
And has neither stockings nor shoes on his feet;
I pity him so! how cold he must be!
And yet he keeps singing his chick-a-dee."
Chick-a-dee, &c.

"If I were a barefooted snow-bird, I know
I would not stay out in the cold and the snow.
I wonder what makes him so full of his glee;
He's all the time singing that chick-a-dee."
Chick-a-dee, &c.

"O mother! do get him some stockings and shoes,
And a nice little frock, and a hat, if he choose;

I wish he'd come into the parlor, and see
How warm we would make him, poor chick-a-dee."
Chick-a-dee, &c.

The bird had flown down for some pieces of bread,
And heard every word little Emily said;
"What a figure I'd make in that dress!" thought he;
And he laughed, as he warbled his chick-a-dee."
Chick-a-dee, &c.

"I'm grateful," he said, "for the wish you express,
But I've no occasion for such a fine dress;
I had rather remain with my limbs all free,
Than to hobble about, singing chick-a-dee."
Chick-a-dee, &c.

"There is ONE, my dear child, though I cannot tell why
Has clothed me already, and warm enough too.—
Good morning! O who are so happy as we?"—
And away he went, singing his chick-a-dee
Chick-a-dee, &c.

previously, and adds a short description. A friend was present at one time when our great American Poet, BRYANT, and a large company were amusing themselves with the game. On this occasion, as several were poets, each was required to repeat a verse of poetry, and close by naming the author. Many beautiful verses were recited, and when Mr. Bryant's turn came, all expected to hear something very fine. He rose and with great gravity gave:

"In Adam's fall
We sinned all.—*Authority: New-England Primer.*" You may well suppose there was great laughter.

THE BACHELOR'S GIFTS.

Another play we saw performed for the first time the other evening by a company of young people, which amused us very much. It may not be new to most of you. We never had time to play much when a boy, and don't know all the plays—there were too many roots to pick up in the meadows, and too much other work on the farm, to admit of much play—perhaps this is one reason why we like so well to be a boy with the young people now. But to the play. The company all stood in a circle, and one was chosen to put questions. He went round and asked every one what gift he or she would make to a bachelor. One said a box, another a chair, another a bed, another a tea-kettle, and so on. He then went round again and asked a lot of questions. Each one was to answer every question by repeating the first word named, and do so without laughing. If any one laughed he was counted out of the ring. One grave young man who had named a tea-kettle as his gift, it was thought would maintain his gravity. The following was the result: "What did you say you would give the bachelor?" "A tea-kettle." "What do you boil your potatoes in?" "A tea-kettle." "What do you feed your pigs in?" "A tea-kettle." "What do you eat out of?" "A tea-kettle." "What do you catch fish in?" "A tea-kettle." "What do you ride to town on?" "A tea-kettle." Of course a general roar of laughter followed here, in which the questioned party joined and was counted out.

"SERVED HIM RIGHT."

Last Winter a young man of our acquaintance went to a mill pond to skate. A short time before, a large quantity of ice had been cut out for filling ice houses, and it had frozen over again, but not sufficiently hard to bear a person. Our friend ventured upon it, and immediately found himself floundering in the water, but being an expert swimmer, soon made his way out. A fellow in the neighborhood met him as he was all dripping from his plunge, and instead of sympathizing with him, or even pleasantly laughing at him about the mishap, coarsely called him a "fool," saying "it served him right, he

ought to have known enough to keep off the ice." Shortly after, this fellow crossed the pond on his way home, stepped on a weak spot, and down he went, splash into the water. He was rescued with some difficulty, amid the jeers of the bystanders, who told him in his own words, "he ought to have known better." He who reproaches the unfortunate will receive little sympathy in his own misfortunes.

THE POOR BECOME THE RICH.

How many times young people wish they were born rich. But this is not a wise desire. We happen to know quite a number of rich men, but nine out of every ten of these persons were the children of poverty. The fact is, it requires just that kind of discipline which struggling with poverty in early life gives one, to develop those habits of self reliance, activity, economy, and energy, which will carry a man forward to wealth and position. This is certainly so—we could quote the example of nearly every wealthy man we know, to prove it. Our young friends, who have perhaps often wished their parents were wealthy, and that they were only children, may console themselves with the thought that it will in the end be better for them, than if their wishes were gratified, though it may not appear to be so pleasant just now.

NEW PROBLEMS.—No. 4. PUZZLING PICTURES.



D, represents a boy in danger of drowning; although we are sure, no water is near.

E, reminds us of a man just getting off from his horse.

F, resembles a very good table sauce in common use. No. 5. A man contracted to purchase the apples from a tree, agreeing to give \$10 for them if there were 10 bushels, and \$15 if there were 20 bushels. 18 bushels were gathered. How much ought he in justice to pay?

No. 6. Rebus.—: L B B B L E D H I S C C C C
 D D D D
 an D 3 X D—60 minutes T T T T.
 throw

ANSWERS TO PROBLEMS.—The "Labyrinth," in the Dec. No. 1859, was successfully entered by W. H. Adams, Jas. H. W. Abbott, Willie B. (sends his best respects to Aunt Sue and the rest of the family), W. A. Buckhout, C. W. L. Smith, Franklin Adams.

ARITHMETICAL PROBLEM (No. 1.) in Jan. No. A, must pay 4 and 3-16 cts. per lb. B, 3 and 11-16 cts. per lb. Solved by, Elizabeth B. Cully, "M. F.", Ralph Lefevre, C. A. Heilig, R. C. Flickinger, David Hooker.

Word Rebus (No. 2).—Ans.

"He that by the plow would thrive,
 Himself must either hold or drive."

Read right by H. R. Dagget, Elizabeth B. Cully, Ralph Lefevre, C. A. Heilig.

Puzzling Pictures (No. 3.).

- The skeleton is evidently a bony part (Bonaparte).
- The man pushes the L, which we may properly call shove L (shovel).
- The poor cur is dead, and as cheese is cur-ded, there is quite a resemblance.

A SHORT CHAT

is all we have time for this month, young friends, for there are so many letters arriving now, that it takes all our time to attend to them, and to look after business, seeds, premiums, etc., etc. After a few weeks, this hurry will be over, and then we will sit down and have long talks with you. Some few people still complain of the amount of space devoted specially to our juvenile readers. But we can not help it. We believe in giving much attention to the young plants in our garden—to start them right. "Just as the twig is bent the tree's inclined."

Premiums.

N. B. These premiums are not offered for competition, but as direct pay for time, labor, and expense incurred by canvassers. The premiums are absolute in each case, and not dependent upon what some unknown person is doing. Every canvasser knows just what he or she is working for.

See remarks following the premiums.

Premium III.—Every person sending in a club of 10 new subscribers at 80 cents each, may order a free copy of either Vol. XVI, or Vol. XVII, or Vol. XVIII, which will be sent in numbers, post-paid.

Premium IV.—Every person sending 15 new or old subscribers at 80 cents each, will be entitled to 16 copies (that is one extra copy), for the coming year.

Premium V.—Every person sending 25 new subscribers at 80 cents each, will be entitled to the three Volumes, XVI, XVII, and XVIII, sent in numbers post-paid.

Premium VI.—Every person sending 30 new subscribers at 80 cents each, will be entitled to a silver-rimmed pocket Microscope—with Coddington lens. Value \$4. Sent by mail securely packed and post-paid. (See Premium 18.)

Premium VII.—Every person sending 45 new subscribers at 80 cents each, will be entitled to a copy of the large new Pictorial Edition of Webster's Unabridged Dictionary. Price \$6.50. It weighs 84 lbs, and can go by express, or be sent by mail at 1 cent per ounce within 3000 miles, or 2 cents per ounce over 3000 miles. (Expense after leaving the city to be paid by recipient.)

Premium IX.—Every person sending 144 new subscribers at 80 cents each, (or 140 at \$1 each), will be presented with one of Wheeler & Wilson's best \$50 Sewing Machines, new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly two year's use in our own family. We want no better.—The machines will be selected at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using go with each machine.

Premium XII.—To every person sending 130 new subscribers at 80 cents each, (or 95 at \$1 each), we will present Appleton's New American Encyclopedia, now in course of publication, consisting of fifteen large volumes of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Eight volumes are now ready, and the remaining seven will be furnished as fast as issued. Publisher's price, \$45.

Premium XIII.—To every person sending 260 new subscribers at \$1 each, or 350 at \$1.50 each, we will present one of the best of Allen's Moving Machines, with sundry improvements now being added. This is one of the best we have seen in operation. Price \$115. Other kinds of Machines of the same price, will be substituted, when specially desired, if satisfactory arrangements can be made with the manufacturers.

Premium XIV.—To every person sending 65 new subscribers at 80 cents each, we will present one of the best Eagle Plows (2-horse). Price \$11. This we believe is the best general farm plow in use.

Premium XV.—To every person sending 55 new subscribers at 80 cents each, we will present the best Subsoil Plow (two-horse), price \$8; or one of the best Horse-Roe price \$6; or one of the best Straw and Hay Cutters,

price \$8. These are all first quality, well-made, and useful implements.

Premium XVI.—To every person sending 48 new subscribers at 80 cents each, we will present one of the best Steel-tooth Cultivators. Price \$7.

Premium XVII.—To every person sending 45 subscribers at 80 cents each, we will present either the Dictionary, (premium 6), or one of the best Hand Corn Shellers. Price \$6.50.

Premium XVIII.—To every person sending 30 subscribers at 80 cents each, we will present either the microscope, (premium 3), or a Double mold-board (ridging) Plow. Price \$3.50.

Premium XIX.—Books. Whenever desired, instead of other premiums, the publisher will pay premiums in books as follows: Every person making up a club of 20 or more new subscribers, may select any Agricultural or Horticultural Books from A. O. Moore's Catalogue, (which is advertised on page 316 October Agriculturist) to the amount of 10 cents for every subscriber, sent in at 80 cents each. Persons making up a club for any of the premiums, and getting some names over the required amount, will be entitled to books for the surplus names. Thus, a person getting 55 subscribers can take for 45 names premium VII, or XVII, and also \$1 worth of books for the extra 10 names; and so in other cases.

REMARKS.—1. The above premiums, except No. IV, are all for NEW SUBSCRIBERS ONLY, as we can only afford to pay premiums for once on the same subscriber. But in making up any premium lists, three renewals of old subscriptions, collected and forwarded by the canvasser, may always be counted as one new name. Names need not all be at the same Post Office.

2. Of course but one premium can be paid on the same name. The canvasser will choose his own premium. Any one striking for a higher premium, and failing to get names enough, can still fall back upon a lower one.

3. Every person collecting names for premiums can send in the names with the money as fast as received, so that the subscribers may begin to receive their papers; but if designed for premiums, a double list of each lot of names should be sent, one of them marked at the top, "For premiums," and with the name of the sender.

4. The above premiums are offered for new subscribers for Volume XIX (1860). Canvassers will have at least a month or two for completing their lists, but the premium will be paid as soon as any list is made up.

Seeds for Free Distribution in 1860.

Each person whose paid subscription to the American Agriculturist extends beyond February, 1860, will be entitled to select four or five parcels of seeds from the general list given in the next column—if the following conditions be complied with.

A. It is of absolute importance that the following directions be strictly followed, even to the minutest particulars. We have 80 distinct varieties of seeds, to be distributed among 70,000 or more persons scattered all over the country, which, at the best, will involve immense labor, and some mistakes must unavoidably occur, unless each subscriber take special pains to facilitate the work.

B. The seeds can now be called for at the office, or be sent by express, or in ready prepared envelopes furnished by the subscribers, as described below.

C. Subscribers at different points can estimate whether they can receive their seeds cheapest by Mail to separate individuals, or in a package by Express.

D. If to go by Express, no envelopes will be needed. In that case, simply send us a written list of the names, marking against each name the kinds of seed desired, using the numbers in the Catalogue. Keep a copy of the list sent, and give particular directions on each list, how the package is to be forwarded, and to whom directed.

E. If to go by mail, the applicant will (of course) furnish prepaid envelopes, of ordinary size, which should be prepared as in the engraving here given—that is: Put the figures corresponding to the Catalogue plainly on the upper left hand of the envelope, and put all the postage stamps upon the right side of the envelope—one above the other

when two or more are needed, as shown in this pattern. This will prevent the seeds being crushed in the stamping process, in the Post-Office. One ordinary envelope will generally hold the amount of seed-packages carried by two or three stamps. The amount of stamps can be calculated from the Catalogue. Single 1-cent stamps on letters are of no value, unless there be even thirds of them, as letter postage is rated by the half ounce.

F. Let all letters referring to seeds be as brief as possible, and yet plain. All such communications are referred directly to the clerk superintending that department. It is especially desirable that whatever relates to seeds should be on a separate slip of paper. (We shall probably

distribute over three hundred thousand packages, and a minute's time saved on each of these would amount to 500 working days of 10 hours each—or nearly two years!)

G. Canada subscribers will need to substitute 10-cent stamps in all cases where 3-cent stamps are named in the catalogue. When several send together, it will usually be cheaper to receive seeds by Express. (Postage is not necessarily prepaid here, on Canada letters.)

H. Always put the stamps upon the envelopes, and not drop them loosely into the enclosing letter.

I. It is always better to send envelopes of the ordinary size, and made after what is called the "Government pattern,"—that is, those in which the back comes under the piece lapping over; these seal up more firmly. This point is not essential, however.

J. Usually, the lighter the envelope the better, that more seeds may go under the same stamps.

K. Send only the number of stamps required for postage on the seed. We have no seeds of any kind to sell.

L. Those forwarding unpaid envelopes, will, of course, not be disappointed if they do not return. We offer seeds free, but cannot, in addition, afford to pay postage also.

M. All seeds sent by mail are put up at our country residence, and each package is there mailed direct, to avoid its being overhauled at the Distributing offices.

N. We shall take time to mail all the seeds carefully and regularly. This will occupy the entire month of February. Those going to distant points, where the seasons are earliest, will be mailed first.

LIST OF SEEDS.

[For Descriptive Notes upon these Seeds see pages 3 and 4 of January number.]

Field Seeds.

- 2—Improved King Philip Corn—Single, double, or triple packages, as may be desired, requiring one, two, or three 3-cent stamps.
- 3—Stowell's Sweet Corn—Same packages as No. 2.
- 94—Crystal Flint or Hominy Corn—Same as No. 2.
- 6—Ashcroft's Swedish Turnip—Half of 3-cent stamp.
- 7—River's Swedish Stubble Turnip—do. do.
- 70—Waite's London purple-top Swede Turnip—do.
- 98—Long Red Mangold Wurtzel—One 3-cent stamp.
- 101—Improved Long Orange Carrot—4 of a 3-cent stamp.

Vegetable or Garden Seeds.

- 8—Daniel O'Rourke Pea—Packages same as No. 2.
- 9—Champion of England Pea—One 3-cent stamp.
- 99—Prince Albert Pea—do. do.
- 57—Eugenie Pea—do. do.
- 58—Napoleon Pea—do. do.
- 12—Green Kohl Rabi—One-third of a 3-cent stamp
- 13—Enfield Market Cabbage—do. do.
- 15—Mammoth Cabbage Lettuce—do. do.
- 63—London Particular Long Scarlet Radish—do.
- 64—Extra Red Round Turnip Radish—do.
- 100—Early Purple Cape Broccoli—do. do.
- 21—Winter Cherry—do. do.
- 95—Hubbard Squash—do. do.
- 102—Mammoth Leghorn Squash—do. do.
- 108—Mammoth Pumpkin—do. do.
- 109—Mammoth Red Tomato—do. do.
- 72—Imported Brussels Sprouts—do. do.
- 76—Musk Melon—do. do.
- 77—Water Melon—do. do.
- 103—Sage—do. do.
- 104—Thyme—do. do.
- 105—Chili Red Pepper—do. do.
- 106—Sweet Marjoram—do. do.
- 17—Red Strap-Leaf Turnip—One-half of a 3-cent stamp.
- 74—Solid White Celery—do. do.
- 75—Green Curled Endive—do. do.
- 55—White Globe Onion—do. do.
- 71—Long White French Turnip—One 3-cent stamp.
- 107—Giant Asparagus—do. do.

Flower, Fruit, and Ornamental Seeds.

- 89—Cotton Plant (2 kinds)—One 3-cent stamp.
- 90—Norway Spruce Seed—One-half of a 3-cent stamp.
- 91—Arbor Vitæ Seed—do. do.
- 111—Castor Oil Bean—do. do.
- 110—New-Rochelle Blackberry—1/4 of a 3-cent stamp.

On an average about five of the following 40 varieties will go under a 3-cent stamp

- 23—Mignonette.
- 25—Mixed Nasturtiums.
- 27—Extra Cockscomb.
- 29—Double Balsams, mixed.
- 30—Tassel Flower.
- 31—Chinese Pink.
- 32—Portulacass, mixed.
- 33—Cypress Vine.
- 34—China Asters, mixed.
- 35—German Asters, mixed.
- 36—Sweet William.
- 40—Escholtzia Californica.
- 42—Foxglove.
- 47—Morning Glory, mixed.
- 49—Campanula.
- 50—Schizanthus.
- 51—Phlox Drummondii.
- 78—Ageratum Mexicanum.
- 80—Yellow Hawkweed.
- 82—Thunbergia.
- 83—Snap Dragon.
- 84—African Marigold.
- 85—Gaillardia, mixed.
- 86—Euphorbia, mixed.
- 87—Coropsis.
- 113—Double Sun Flower.
- 114—Mixed Petunia.
- 115—Mix. Dbl. Hollyhocks.
- 116—Mourning Bride.
- 117—Mix. Dbl. Wallflower.
- 118—Bee Larkspur.
- 119—M'd Chrysanthemums.
- 120—Clematis (Climber.)
- 121—Trumpet Creeper.
- 122—M'l Canterbury Bells.
- 123—Gilia nivalis.
- 124—Whitewia.
- 126—Long-tubed Centranthus.

(Official.)

Agricultural Convention at New Haven.
TO BE HELD DURING THE MONTH OF FEBRUARY, 1860.

[We have already announced the important agricultural and horticultural convention to be held at New-Haven, the present month, and have advised every one who can do so to attend during the entire month. Below we give the official Programme of the lectures to be given. As each lecture will be followed by questions to the lecturers and discussions by the attendants, one can hardly fail to obtain a vast amount of practical information at comparatively little expense. The names of the lecturers given below are a sufficient guaranty of the importance and value of the course. Had it been compatible with our other engagements, we should gladly have responded to the invitation to take part in the exercises; as it is, we hope to attend as a listener, at least a part of the time.]

FIRST WEEK—Science in its Relations to Agriculture. Chemistry.—Prof. S. W. Johnson.

Meteorology.—Prof. B. Silliman Jr.

Entomology.—Dr. Asa Fitch.

Vegetable Physiology.—Daniel C. Eaton.

SECOND WEEK—Pomology, etc.

General Pomology.—Hon. M. P. Wilder.

Grapes.—Dr. C. W. Grant.

Berries.—R. G. Pardee Esq.

Fruit Trees.—P. Barry Esq.

Fruits as Farm Crops.—L. F. Allen, Esq.

Arboriculture.—Geo. B. Emerson Esq.

Agricultural Chemistry.—Prof. S. W. Johnson.

THIRD WEEK—Agriculture Proper.

Drainage.—Hon. H. F. French, Esq.

Grasses and Irrigation.—J. Stanton Gold.

Cereals.—Joseph Harris Esq.

Hops, Tobacco &c.—Prof. Wm. H. Brewer.

Cultivation of Light Soils.—L. Bartlett, Esq.

English Agriculture.—L. H. Tucker, Esq.

German Agriculture.—Dr. Evan Pugh.

Agricultural Education and Statistics.—Prof. John A. Porter.

FOURTH WEEK—Domestic Animals, &c., &c.

Principle of Stock Breeding.—Hon. Cassius M. Clay.

Stockbreeding in the U. S.—Lewis F. Allen Esq.

Breeding for the Dairy.—Charles L. Flint, Esq.

Horses.—Sanford Howard, Esq.

Breeding and Training Horses.—Dr. D. F. Gulliver.

Root Crops and Sheep Husbandry.—T. S. Gold, Esq.

Pisciculture.—John C. Comstock, Esq.

Rural Economy.—Donald G. Mitchell, Esq.

Agricultural Associations.—Mason C. Weld Esq.

ARRANGEMENTS. An average of three lectures per day will be given from Feb. 1st to Feb. 25th, inclusive, making sixty six lectures in all. For the accommodation of persons desiring to spend Sunday at home, there will be no Lecture on Saturday afternoon or Monday forenoon. Each Lecture will be followed by questions and a discussion. Persons attending the Lectures will have the liberty of introducing other topics besides those of the above list, and thus eliciting information adapted to their own case. Among other distinguished gentlemen, beside the Lecturers, who will attend, John Johnson, Esq. of Geneva, the pioneer in American The Drainage will be present during the third week of the course, to give any information desired as to his own experience in Drainage. This Course of Lectures will be made intelligible and useful to beginners in Agriculture, as well as to experienced Farmers. Board at very reasonable prices may be obtained by early applicants. Tickets for the whole Course, \$10. For any single week \$3. Single lecture 25 cts. For a detailed programme with subjects of each of the sixty-six Lectures address Prof. JOHN A. PORTER, New Haven, Ct.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
New York, Thursday Evening, Jan. 19, 1860.

The transactions in Breadstuffs have been quite limited, since the date of our last. The receipts have been light, and the stocks on hand have been reduced somewhat. Prices have fluctuated throughout the month. The inquiry for Flour has been moderate. The home traders have been the principal buyers. Shippers have been disposed to purchase freely, but at prices which have not been generally satisfactory to holders, who claimed higher rates, and partially succeeded in establishing an advance, which has prevented an active trade. The recent tightness in the money market has worked against holders of produce. Some of them have been compelled to dispose of their supplies, and the efforts to do so, have had the effect of depressing prices, which now have a downward tendency. The stock of all kinds of wheat flour in this market, on the 1st of January, amounted to 917,329 bbls., against 741,541 bbls. at same date in 1859, and 603,150 bbls., at the beginning of 1858. It is believed that the quantity here at the present time is rather less extensive....Wheat has been less freely offered, and higher prices have been demanded. The inquiry has

been restricted, and mainly from millers and shippers. Some speculative purchases have been made on Western account. The market is now heavy, and the tendency of prices downward. The stock of Wheat here on the 1st of January comprised 1,915,388 bushels, against 1,211,312 bushels the 1st of January 1859, and 389,000 bushels at the beginning of 1858....Corn has declined materially; the demand having been quite moderate. The stock on hand January 1st, was only 79,400 bushels, against 669,690 bushels January 1st 1859, and 97,000 bushels same date in 1858....Rye has been quiet and languid. Stock on the 1st of January; 30,500 bushels, against 43,500 bushels, same time last year....Barley has attracted less attention, and prices have favored buyers. On January 1st there were 560,544 bushels on hand, against 807,416 bushels same time in 1859....Oats have been moderately sought after at rather lower rates. Stock here 1st of January 1,576,100 bushels, against 560,200 bushels January 1st, 1859....By reference to our previous issue, it will be noticed that our estimate of the stocks of Flour and Wheat here, approach very closely to the actual amount found to be on hand....Cotton has been in request at, however, a shade easier prices....Hay, Hops, and Tobacco have been in good demand....Hay has advanced materially. The stock is limited....Hemp, Seeds, and Wool have been sparingly inquired for....Provisions and Rice have been moderately dealt in....The transactions in most other kinds of Produce have been limited.

CURRENT WHOLESALE PRICES.

	Dec. 19.	Jan. 19.
Flour—Superf to Extra State	\$4 95 @ 5 25	\$5 20 @ 5 45
Common Western	4 90 @ 5 10	5 20 @ 5 30
Extra Western	5 15 @ 5 30	5 35 @ 5 50
Fancy to Extra Genesee	5 30 @ 5 50	5 50 @ 5 75
Super. to Extra Southern	5 35 @ 5 55	5 50 @ 5 75
Rye Flour—Fine and Super.	3 60 @ 4 40	3 60 @ 4 40
Corn Meal	3 80 @ 4 25	3 85 @ 4 25
Wheat—Canada White	1 35 @ 1 40	1 37½ @ 1 45
Western White	1 37½ @ 1 50	1 37½ @ 1 50
Southern White	1 40 @ 1 55	1 40 @ 1 55
All kinds of Red	1 14 @ 1 35	1 19 @ 1 35
Corn—Yellow	98 @ 1 00	82½ @ 85
White	98 @ 1 00	82 @ 84
Mixed	96 @ 1 00	83 @ 84
Oats—Western	46½ @ 47½	45 @ 46
State	46½ @ 47½	45½ @ 46½
Southern	42 @ 44	40 @ 43
Rye	88 @ 90	88 @ 91
Barley	70 @ 88	75 @ 88
White Beans	1 00 @ 1 20	1 00 @ 1 20
Hay, in bales, per 100 lbs.	85 @ 1 00	1 12 @ 1 25
Cotton—Middle, per lb.	11½ @ 11½	11½ @ 11½
Rice, per 100 lbs.	3 50 @ 4 37½	3 50 @ 4 25
Hops, crop of 1859 per lb.	12 @ 18	12 @ 18
Pork—Mess, per bbl.	26 @ 26	16 @ 16
Prime old, per bbl.	11 37 @ 11 50	11 @ 11
Best Reserved Mess.	9 @ 9 75	9 00 @ 9 50
Country mess	5 12½ @ 5 50	5 00 @ 5 25
Hogs, Dressed corn, per lb.	7 @ 7½	6½ @ 7½
Lard, in bbls, per lb.	10½ @ 11	10½ @ 10½
Butter—Western, per lb.	11½ @ 18	12 @ 17
State, per lb.	14 @ 15	15 @ 15
Cheese, per lb.	8 @ 11	9 @ 11½
Eggs—Fresh, per dozen	20 @ 21	21 @ 24
Lined	16 @ 17	17 @ 18
Poultry—Fowls, per lb.	8 @ 10	8 @ 12
Geese, per lb.	8 @ 10	8 @ 10
Ducks, per lb.	10 @ 12	11 @ 13
Turkeys, per lb.	10 @ 11	10 @ 13
Venison, per lb.	8 @ 11	8 @ 11
Feathers, Live Geese per lb.	43 @ 52	43 @ 52
Seeds—Clover, per lb.	8 @ 8½	8 @ 8½
Timothy, per bushel	2 00 @ 2 62½	2 12½ @ 2 75
Sugar, Brown per lb.	6½ @ 8½	6½ @ 8½
Molasses, New-Orleans, prgl	50 @ 51	51 @ 52
Coffee, Rio, per lb.	10½ @ 12½	10½ @ 12½
Tobacco—Kentucky, &c, pr lb.	4½ @ 12	4 @ 12½
Seed Leaf per lb.	6 @ 25	6 @ 25
Wool—Domestic fleece, per lb.	37½ @ 62½	38 @ 62½
Domestic, pulled, per lb.	30 @ 52	30 @ 52
Hemp—Under Amer per ton	125 @ 150	120 @ 150
Dressed American, per ton	185 @ 200	180 @ 200
Tallow, per lb.	10½ @ 10½	10½ @ 10½
Oil—Coke, per ton	28 00 @ 35 00	27 00 @ 35 00
Apples—Dried, Per lb.	6 @ 7½	6 @ 8
Dried Peaches—per lb. Southern	10 @ 17	10 @ 17
Potatoes—Merced, p. bbl.	1 50 @ 2 00	1 75 @ 2 13
Peach Bloss, per bbl.	1 25 @ 1 75	1 25 @ 1 62
Sweet, Virginia, per bbl.	1 50 @ 1 75	None offering.
Delaware, per bbl.	2 50 @ 2 75	3 00 @ 3 25
Calabages, per 100	2 00 @ 2 50	2 00 @ 2 50
Onions, Red, per bbl.	1 75 @ 2 00	1 62 @ 1 75
White and yellow, per bush.	1 75 @ 2 50	1 75 @ 1 87
Squashes, Marrow, p. bbl.	2 50 @ 5 00	1 75 @ 2 00
Turnips, Rutabaga, per bbl.	88	1 13 @ 1 25
Apples, Winter, per bbl.	2 25 @ 4 00	2 25 @ 3 50
Cranberries, per bbl.	15 00 @ 17 00	12 00 @ 14 00
Hickory Nuts, per bush.	1 00 @ 1 25	1 25 @ 1 50

TRANSACTIONS AT THE N. Y. MARKETS.

RECEIPTS. Flour, Wheat, Corn, Rye, Barley, Oats
25 bus days this mon., 126,630 74,900 179,550 3,900 23,875 141,600
24 bus. ds. last mon., 523,050 533,347 204,776 43,461 413,577 815,000

SALES. Flour, Wheat, Corn, Rye, Barley
25 business days this mon., 261,750 192,800 437,500 24,100 45,000
24 business days last mon., 450,470 571,150 306,770 67,400 302,100

The following are the exports of the principal kinds of **BREADSTUFFS**, from the Atlantic ports of the United States, since Sept. 1:

TO GREAT BRITAIN AND IRELAND.

From	To date	Flour, bbls.	Wheat, bu.	Corn bu
New York, Jan. 13, '60.	170,773	411,421	.....	.....
New-Orleans, Jan. 1, '60.	4	.....	.....	.....
Philadelphia, Jan. 10, '60.	3,956	32,821	.....	.....
Baltimore, Jan. 3, '60.	.....	.....	.....	.....
Boston, Jan. 6, '60.	731	.....	.....	.....
Other Ports, Jan. 1, '60.	15	.....	.....	.....

Total from Sept. 1, '59.. 175,479 464,242
To about same period, 1858.. 83,787 412,423 319,332
To about same period, 1857.. 444,035 3,088,120 6,023,234
To about same period, 1856.. 554,275 6,417,428 2,431,880

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been pretty well supplied during the past month, but not largely overstocked. The heavier weights of the bullocks recently brought in have added more to the actual amount of meat, than the numbers would indicate. The largest bullock ever sent to this

market, was sold one week ago for \$850. He was a Durham ox, seven years old, raised in Dutchess Co., N. Y., and weighed upon the scales at the yards, 3,492 lbs. gross. One fat pair of premium beefs brought near \$700. For the five weeks ending Jan. 18, the receipts were 20,038 or an average of 4,007 per week. At yesterday's general market, Premium beefs brought 10c. @ 10½c.; First quality, 9c. @ 10c.; Medium, 8c. @ 8½c.; Poor and ordinary, 5c. @ 7c.; with an average of 7½c. @ 7½c., for all the animals sold.

1859—Total receipts of Beefes, in N. Y. city....205,396
Weekly average..... 3,950

VEAL CALVES.—Receipts for five weeks past, 1,984—a falling off from previous weeks. Prices range at 5c. to 7c. per lb., live weight, according to quality.

1859—Total receipts in N. Y. city.....35,513

SHEEP AND LAMBS.—These come in less freely, and command better prices. For the five weeks just ended 49,014 live sheep have been sent to this market, besides large numbers of dressed carcasses. They are now in fair demand at prices equivalent to 5½c. @ 6c. pr. lb. live weight for good fat sheep, and from that down to 4c. pr. lb.

1859. Total receipt of Sheep in N. Y. city.....56,791
Weekly average..... 9,784

HOGS.—Receipts have been large, footing up 66,776 for the past five weeks, which is an average of 13,355 pr. week. Besides these there have been very large arrivals of dressed hogs, many of them in a frozen state. Prices have mainly ruled low. They are now selling at 5½c. @ 5c. pr. lb. live weight, for corn-fed, and 4½c. @ 5c. for still fed.

1859. Total receipts of Hogs in N. Y. City.....392,325

The Weather for the month ending Jan. 18th, has at times been extremely severe. Considerable snow has fallen, and sleighing has continued rather longer than is usual. The season is, thus far, generally considered good for winter grain, and on the whole the month can not be called unpleasant. Our **DAILY NOTES**, condensed, read thus: December 18, cloudy—19, clear and fine—20, rainy—21, 22, cloudy and cool—23, clear and cool—24, 25, clear and cold—26, cloudy and mild—27, clear and growing cold—28, coldest day of the season, cloudy A. M., snow P. M.—29, cold; cloudy A. M., snow P. M.—30, cloudy A. M., clear P. M.—31, clear and cool—January 1, 2, 3, clear and cold—4, snow storm—5, 6, clear and cold, good sleighing—7, cloudy and mild, rain at night melted most of the snow—8, cloudy A. M., clear and warm P. M.—9, clear and warm—10, foggy, cloudy and warm—11, the same, with rain and snow at night—12, snow A. M., clear P. M.—13, clear, moderate rain and snow at night—14, snow and rain—15, 16, clear and mild—17, cloudy and mild—18, cloudy, and warm.

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Into which are thrown all sorts of paragraphs—such as NOTES and REPLIES to CORRESPONDENTS, with Useful or interesting Extracts from their Letters, &c., &c.—to be drawn from as we have room left here.

To Correspondents.—An unusual lot of communications, hints, suggestions, and queries are coming in daily with the letters enclosing subscriptions. We have also several letters received heretofore, but laid aside for consideration. Not unfrequently a query is kept for months in order to make investigations, or to find time and place for a reply. We are thankful for the many favors received, but trust our friends will be patient if we sometimes keep their letters on hand for months, until a reasonable opportunity occurs to introduce them. Very often a studied article is suggested by a dozen or twenty queries, without referring directly to them.

One other item. We try to adapt articles to the season in part, and often prepare items which lay over until their appropriate time. Further, the length of time required to work off the large edition of the inside sheet, which contains most of the illustrations, and must be printed slowly, compels us to prepare all matter for that sheet, and send it to press a month in advance, and articles appropriate to those pages (9 to 24) must be on hand several weeks before they can appear.

The New American Cyclopaedia.—Vol. VIII. of this valuable work, from the publishing house of D. Appleton & Co. has come to hand freighted as usual with stores of information packed in well written, condensed articles. The topics, arranged alphabetically extend from FUG, to HAY, covering a space of 747 double column pages and numbering some 1600 separate articles. Science, Art, Biography, History, in short every department of knowledge is drawn upon to make the work what it professes to be, a compendium of what is known.

Sending Crafts by Mail.—M. M. Ferguson, Williamson Co., Texas. Cuttings for transmission by mail should have their cut ends coated with wax, or gum-shellac dissolved in alcohol, wrapped in oil silk to retain the moisture, and so enveloped as to be secure from injury by rubbing. Secured in this way they will go safely to distant points. A subscriber sent a parcel to Fort Laramie, N. T., last Winter, which are now thriving.

Aphis, or Plant Louse.—J. Morton, Reusew Co., C. W. The new shoots of your young apple trees are infested by green, or plant lice. They can be easily destroyed by a pretty strong decoction of tobacco water. Steep the stems or waste of tobacco for twenty four hours, and with a pail of the liquor, go among the trees bending the infected shoots into the water which will quickly kill the aphides. It is well to make a trial or two before using it extensively, reducing with water if needed, for if too strong it may injure the twigs. Sprinkle or syringe those branches which can not be dipped repeating the process if a second brood of insects appear.

Grub or White Worm in App's Trees—Borers.—E. F. Maynard, M. D., Essex Co., N. J. The white grub with a dark head, you describe, is that destructive pest, the apple borer (*Saperda bivitata*) of which both the worm and winged parent are shown on page 50 (Feb. No.) of volume 17. A full chapter upon the insects is there given, and another article on page 243 of the same volume (Aug. No.), to which we refer you. There are numerous hints on the same subject in the Orchard Calendar of recent papers. Several other inquirers will find their questions answered as above.

Taylor's Tree Protector.—J. C. J., of New Castle, inquires for the results of actual trials with this apparatus the past year, by those uninterested in its sale. He adds: "It has always been understood that it is the Codling moth which produces the worms in apples by stinging the young fruit. But said moth being a winged insect, he would hardly stop to wade the troughs on the trunks to get to the branches."

Bugs.—J. A. Stuart, Middlesex Co., Mass. The "creeping thing" you sent us is not recognized, either as friend or foe; being dead and crushed when taken from the mail, we are unable to watch its transformation. Observation of their habits in their several states is the best means of ascertaining whether they are injurious.

Timothy—Herds-grass.—(To several subscribers.)—These are only different names for the same vari-

ety. It is best sown in the latter part of August, and in the month of September. It may be put in with grain or alone. Many farmers prefer the latter. Plow and harrow as for grain, sow a half bushel to the acre, and cover with a brush harrow. It may also be mixed with clover seed and sown on Winter grain in the Spring, when the ground is frozen in the morning.

Hedges for Shelter.—F. M. Henrick, Washtenaw Co., Mich. Honey Locust will make a good hedge in the place desired, but as a protection from the cold north winds, Arbor Vitae, red cedar, or some other evergreen would be preferable. With either sort for a hedge it would be better to remove the standing trees, or plant the hedge just inside of them.

Chrysanthemums from Seed.—A. Hopkins, Berkshire Co., Mass. The Pompon varieties of the Chrysanthemum as well as other kinds, may be raised from seed. It is better, however, to procure these from slips or roots, especially when particular kinds are wanted, as there is no certainty of the seed growing true, to kind.

Horse Nettle (*Solanum Carolinense*).—C. Floyd Co., Ind. The Yellow berries you sent us, are not the Winter Cherry, but a fruit under the above name, and too nearly resembling the poisonous nightshade to be eatable. A description of the Winter Cherry (*Physalis*), with cuts, is given on page 341, Vol. XVII, which will readily enable you to identify the plant or fruit, when seen.

Perennial Winter Cherry.—Thomas Allen, Athens Co., Ohio has forwarded a specimen of a variety of Winter Cherry (*Physalis*) of which the roots were found green and full of living buds on December 6th, which indicates that it is perennial. It bears quite a resemblance to the *Physalis Viscosa*; the fruit is smaller and remains attached to the vine when ripe, while the common variety (*viscosa*) drops off as soon as ripe.

Securing second growth of Timber.—H. Jessup, Chautauque Co., N. Y. The second growth of timber will sprout most readily we believe, when forests are cut during Winter.

Hong Kong Geese, Pen Fowl, etc.—We have not at hand the particulars as to price, cost of transportation, and other items asked for by a subscriber in Rock Island Co., Ill., Dane County, Wis., and Jackson Co., Tenn. For full information address C. N. Bement, Po'keepsie, N. Y., or Richard McCormick jr., Woodhaven, Long-Island (N. Y.), or some of those who advertise poultry from time to time in the *Agriculturist*.

Antimony for Swine.—S. J. Wheeler, Hartford Co., N. C. Powdered Antimony is sometimes given to fattening swine to assist digestion and promote appetite; half an ounce mixed with the food once in ten days, is the amount prescribed by Youatt. Sulphur administered in the same manner, is generally used, and probably preferable.

Keeping Potatoes.—H. Shane, Jefferson Co., O., gives the following directions for keeping potatoes free from rot through the Winter. Let the potatoes be perfectly dry when stored. On the bottom of the bin, or barrel, place a layer of spent tan bark, say an inch thick, on which place the potatoes to the depth of a foot; then another layer of bark, then potatoes, and so on till the bin is filled, leaving the top covered with bark. This will, we judge, preserve from dampness to some extent and favor their remaining sound. It is worth a trial.

Thorley's Cattle Food.—A number of subscribers inquire about this article which is now advertised in *flaming* showbills, etc. We are investigating the subject, and will now only say that at best it is only a condiment which may sometimes be useful to diseased or debilitated animals, and not a profitable article of food as nourishment. A leading agricultural journal in England estimates that the price asked for it, is six or seven times the cost of the materials of which it is composed. We shall have more to say of it.

"Miner's Bee Hive" not Patented.—M. E. H., Columbia Co., N. Y. No patent has ever been granted to T. B. Miner, for any bee-hive, or any improvement upon a hive—at least so says a recent letter from the Commissioner of Patents now before us. Miner formerly sold "Rights" to use "Miner's Patent Bee-Hive," at \$2 each. We supposed that after being once called to account, he had stopped doing so, but we still find these rights advertised on the fly leaf of a book on sale in this city. Those who have paid Miner for such "rights" on the supposition that the article was patented, must settle the matter with him.

Manufacturing Ice.—Jno. G. Storrs, Tioga Co., N. Y., living at a distance from any pond or stream supplies his ice house thus: A tin vat, 30x20 inches, and 16 inches deep, with the sides a little flaring, is filled with water and left to freeze. When the sides are frozen sufficiently solid, the vat is inverted, the block removed by

pouring a little hot water over the tin, and left to become solid. The process is repeated until a supply is made, though this requires some trouble.

A Bad Failure—Explanation.

The non-appearance in this number of the promised first article on "How Things are made," demands an explanation. In October last we received a written communication from a gentleman well known as an interesting and instructive writer, and who occupies a responsible editorial position in this city. In his letter, he proposed on certain terms, which were specified, to furnish for the *Agriculturist* an extended series of illustrated articles—of the form and character announced in our November and December issues. We very cheerfully acceded to the terms without the least abatement, and accordingly made the announcement after showing a proof of it to the writer and receiving his approval. The first article for the beginning of this volume was to be furnished in November, but after several calls for it, it did not come to hand in time for last month.—sundry reasons being given, such as the unwillingness of manufacturers to have their processes made public, etc. But a note from the writer (see page 25 Jan. No.) left us still confident that the articles would be forthcoming. All we can now say is, that after frequently sending for the copy, we have to-day (Jan. 14th) received a note informing us that the writer "finds it impossible to meet his engagement with us and our readers." This matter has been a source of no little vexation, and we exceedingly regret the final failure, for our own credit's sake, as we have always aimed to fulfil every promise, though we trust that after the full explanation now made, we shall be excused for what is in no wise our own fault, especially as the original proposition did not come from us. We shall from this result, learn to henceforth adhere more strictly to our general rule, viz: not to announce an article until actually in type. To our readers we will promise that they shall lose nothing by the present absence of these articles, as we shall spare no effort to hereafter obtain similar information from other sources—or at least to fill our pages with what may be equally useful and interesting.

PUBLISHING EDITOR.

To Onion Growers.

Perhaps all who are cultivating onions somewhat largely, may not be aware that we published last year a very valuable little work of 31 pages on the subject—consisting of seventeen practical essays by as many different men who have had extensive experience, in various parts of the country. These essays are short, condensed, and full of useful information. They are all written independently, and in competition for a prize offered by us. As the several writers were cultivating under different circumstances, they each supplied information differing somewhat in detail, from the others, and taken altogether the instruction is very complete. Deeming these essays too valuable to be lost, and not having room for them in this journal, we published them in neat pamphlet form, and offered them at a price (21 cents including postage) which will in the end just cover the cost. We have a few hundred copies left, and will print more should they be wanted, as we have kept stereotype plates. This is not a matter of pecuniary profit; we only speak thus particularly of the work, because we think it of great value to every one raising onions for sale.

\$20 Premium for Plan of a Barn.

A friend authorizes us to offer \$20 Premium, for the best plan of a Barn to suit his peculiar circumstances. We propose to publish an engraving of one or more of the plans offered, in the *Agriculturist*. The barn required is for a small plot, say four or five acres, near a village. It is to cost about \$900 to \$1200. It will stand on a line with the north side of a street. The internal arrangement is to comprise: A carriage floor for three four-wheeled vehicles, and one sleigh—accessible both from the street and rear; stalls for four horses, and two cows; grain and feed bins; root, and manure cellars; tool-room and workshop combined, with ample space for storing farm and garden implements; one or more rooms for storing garden truck of various kinds in Autumn; ample space for hay and straw above. Any other suggestions as to outside style, or internal arrangements and conveniences, will be taken into account. The plans may be addressed to C. T., care of this office, at any time prior to March 25th. If any plan is presented which is acceptable, or of sufficient interest to be published in the *Agriculturist*, we will guarantee the payment of the premium, which is offered in good faith.

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We have complete sets of volume (XVIII), bound in neat muslin covers, with gilt lettered backs—also bound sets of Vol. XVII and Vol. XVIII in one cover. We have also bound and unbound copies of volumes XVI and XVII singly, and the two bound together.

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The average circulation of the *Agriculturist* for six months past has been somewhat over **Fifty Thousand Copies** per month. This is believed to be a larger circulation than that of any other Agricultural or Horticultural Journal in the world. Very large accessions of new subscribers are daily received.

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Who has been a practical farmer from his boyhood, has had large experience in Scotland, England, and in this country; understands draining and reclaiming wild land, raising stock, &c. His wife has also been raised on a farm, and thoroughly understands butter making and in-door farming generally. They would like to take charge of a farm for a gentleman or farmer and beg to refer for character and ability to CHARLES SHIELDS, Buffalo Savings Bank, Buffalo, N. Y.

Or for conditions, &c., address
G. FAIRBAIN, Cheektowaga, Erie Co., N. Y.

GARDENER WANTED.—A competent

man will be wanted during the coming season to go a few miles from this city, to work a couple of acres, devoted to cultivating vegetables, flowers, fruits, and seeds of various kinds. An enterprising, active man, having practical knowledge of his business, but not too old or too "set in his way" to learn more, will be able to obtain a good situation, and probably a permanent one. Testimonials of competency, and of upright, reliable character will be required before a final engagement is made. Address, by letter only, in the applicant's own hand, stating experience, age, family, expectations, and references, to F. S. S. care of American Agriculturist.

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Grafts of the Baker Apple at..... \$0 50 per dozen.
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The People's Mill can be put into any saw mill.

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One of Many.

We beg pardon, if need be, for inserting the letter below. It is very seldom that we occupy space with the kind commendatory notices from our contemporaries of the press, or from our subscribers, though we have on file enough of them to fill many entire numbers of the paper. Our jealous western brother editor who recently hinted that others did not fulfil their promises of premiums, etc., will please "put the following in his pipe and smoke it," and if this does not soothe his disturbed nerves, let him call on us and we can privately furnish him any quantity "more of the same sort."

Bridgewater, Mass., Dec. 29, 1859.

Ed. of Agriculturist.

DEAR SIR:—Your letter of the 27th enclosing a receipted bill for a Wheeler & Wilson Sewing Machine was received last evening, in which you say that "you have made extra efforts to get the machine off at once, and that perhaps you will receive it by Thursday." Well, sure enough, Thursday morning's Steamboat train brought it. It has the appearance of being a perfect machine, and Mrs. Keith, will have a splendid New-Year's present. For this meritorious promptness on your part, I extend my grateful thanks, and for the premium itself, my special acknowledgment.—When I had obtained 60 of the required 144 subscribers, I began to falter, but an incidental remark in a business letter from your clerk, assured me that the machine "was a prize worth seeking." I persevered, and the prize more than meets my expectations.—Long live the American Agriculturist, and its liberal hearted Proprietor.

Truly Yours, L. KEITH.

Sundry Notes on Money Matters.

We willingly receive in payment of subscriptions the bills of all specie paying Banks in the States and Canadas, and would not have our subscribers put themselves to any special inconvenience to get other money than that current in their several localities. Still, as the profit on a subscription is very small, we shall feel obliged, if when just as convenient, persons remitting money will send those bills the nearest to par value here. Nearly all our payments for materials and labor must be made in current funds, and hence we are obliged to pay a discount to brokers, on nearly all subscription money received. The rate of discount varies a little from time to time, but the following are about the average sums we pay on each hundred dollars received in bills.

Nova Scotia Banks (British Province).....	\$10.00
New Brunswick, (British Province).....	5.00
Illinois, Wisconsin, Iowa, (now \$34) usually.....	3.00
Tennessee, Missouri (just now \$3) usually \$1 to.....	2.00
Alabama, Indiana, (except State Bank).....	1.50
North Carolina, Georgia, (except Savannah and Augusta).....	1.25
Virginia, Ohio, Kentucky, Indiana State Bank.....	1.00
Pennsylvania (interior and Western), Maryland (except Baltimore), Louisiana.....	.75
South Carolina, Savannah and Augusta, Geo. and Honesdale, Pa.....	.50
Delaware, Baltimore, Md., Eastern Pennsylvania.....	30
New Jersey, and New York State.....	10
New England.....	10
New York City, Hudson River, 5's in Eastern N. J., Easton Bk, Pa., Piquette, Pequonock, Ct., etc. Par.	

Checks on banks out of the city cost us 25 cents and upward for each—no matter how small the amount.

Drafts or checks on New York city banks are equivalent to gold. We always prefer these on all sums of \$10 and upward, for if payable to our order, they can not be lost or stolen from the mails. On these we are always willing to allow the cost of exchange, if not exceeding one per cent, and half the exchange if two per cent or more.

Postage Stamps are convenient for remitting small sums; they should always have a piece of paper between the gummed sides, when mailed, to prevent their adhering together. Ten cent stamps are not so easily sold as 3-cent stamps, but can be disposed of in time. The 3-cent stamps are most desirable.

Gold Coins should always be securely fastened in a card, or between two thick pieces of paper, by pasting or stitching, before putting them into a letter. Letters enclosing money should always be well fastened, clear to the corners, to prevent money from slipping out, and also to prevent their being opened.

Always be sure that you have actually put the money in before sending, and that the outside direction is right, and also that the name, Post Office, and State be given inside. Very many letters come to us with one or more of these items omitted.

Notes on Postage.

No Postmaster has any legal right to charge over Six Cents a year postage on the American Agriculturist. The paper is manufactured expressly with reference to having each number weigh a trifle less than three ounces, when weighed dry and without the wrapper, as the law directs; and the law is explicit that periodicals weighing not over three ounces, shall be charged one-cent each, if sent singly, and only half this rate when the postage is paid quarterly in advance at the office where received.



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All our readers who anticipate sending for seeds, will please do so at as early a day as possible. We provided an ample supply of all kinds, so far as we could form an estimate in advance, but it happens that at least ten thousand persons have taken a fancy to particular kinds of seed, so the probability is that some varieties will soon run out. Those sending hereafter, will do well to put a second list on the lower left hand corner of the envelopes, to be selected from, in case the upper list can not all be furnished. Three kinds, Nos. 81, 112, and 125, are already nearly out.

For 112 we put down 1 of 3-cent stamp in the list, not expecting to get clean seed, as we succeeded in doing. This and a few other parcels appear small. Those who think so, will please count the seeds, if they have time and patience enough. Some of these choice seeds cost us \$40 per lb.

A Request.—May we ask our friends when sending for seeds to do us the favor to cast about, and see if they can not at the same time send on the subscription of a neighbor or friend. Favors of this kind will be reciprocated in any way practicable by sending any extra parcels of seed desired, or otherwise.

American Agriculturist.

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All business and other communications should be addressed to the Editor and Proprietor.

ORANGE JUDD.

No 169 Water st., New-York.